

National Naval Medical Center Master Plan Update 2008

Bethesda, Maryland

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Rogers, Lovelock & Fritz, Inc.

Sherlock, Smith & Adams, Inc.

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1. EXECUTIVE SUMMARY

1.1 The NNMC Bethesda Master Plan 2008 Update

The most recent approved National Naval Medical Center (NNMC) Master Plan was completed in 1990. The stated goals of the 1990 Master Plan were geared toward stabilizing patient care operations and increasing access to patient services. As NNMC worked toward those goals, there have been many changes throughout the campus, but the basic concepts have remained the same. Now as a result of the requirements of the BRAC 2005, the latest amendment to the Defense Base Closure and Realignment Act of 1990, there will be a tremendous expansion of services at the NNMC campus and the Master Plan must be updated to provide direction in terms of logical land use planning for that growth. BRAC 2005 will realign tertiary care and additional activities from Walter Reed Army Medical Center (WRAMC) to NNMC. The new center will be known as the Walter Reed National Military Medical Center at Bethesda (WRNMMC).

This NNMC Master Plan Update was contracted through NAVFAC Washington under an Indefinite Quantity Contract for Facility Planning and Master Planning Components, Various Locations, A/E Contract #N62467-01-D-0328.

The purpose of updating the existing master plan is to address future anticipated development. In line with this is improving the primary (health care delivery and medical education) and secondary supporting missions of NNMC. This scope includes preparation of a Comprehensive 10-year Master Plan that determines the most efficient and effective utilization of the available base infrastructure and land for all of the requirements identified to include the BRAC and additional development anticipated.

The Master Plan provides a logical basis and a framework for anticipated development throughout the campus considering existing constraints and opportunities. Based on input provided by the users, it takes into account population growth and associated facilities to accommodate the expansion and realignment of services. Of course, the actual program is dependent on many variables and some of the anticipated growth may not materialize as anticipated, but the Master Plan provides a framework to ensure orderly growth when it does occur.

1.2 Current NNMC Missions and Visions

1.2.1 Growth

Significant expansion of service is expected as a result of the realignment of certain Walter Reed Army Medical Center (WRAMC) activities from Washington, DC to the National Naval Medical Center (NNMC) in Bethesda, MD per Public Law 101-510, the Defense Base Closure and Realignment Act of 1990 (BRAC Law) as amended in 2005. The specific BRAC recommendation is to:

“Realign Walter Reed Army Medical Center, Washington, DC, as follows: relocate all tertiary (sub-specialty and complex care) medical services to National Naval Medical Center, Bethesda, MD, establishing it as the Walter Reed National Military Medical Center Bethesda, MD; relocate Legal Medicine to the new Walter Reed National Military Medical Center Bethesda, MD; relocate sufficient personnel to the new Walter Reed National Military Medical Center Bethesda, MD, to establish a Program Management Office that will coordinate pathology results, contract administration, and quality assurance and control of Department of Defense (DoD) second opinion consults worldwide; relocate all non-tertiary (primary and specialty) patient care functions to a new community hospital at Fort Belvoir, VA.”

These actions recommended by BRAC 2005 must be complete on or before 15 September 2011. This not only impacts the medical functions, but has significant impact on support services and infrastructure as well. Additional facilities and infrastructure, not specifically identified in BRAC law (or statute), will be required and have been defined by the users throughout this process.

When the realignment is complete, the existing Walter Reed Army Medical Center will close and NNMC will be renamed the Walter Reed National Military Medical Center at Bethesda, MD and will serve as the new premier medical center. It will provide a full range of care to include complex specialty and subspecialty care. WRNMMC will be the military's tertiary referral center worldwide.

1.2.2 National Naval Medical Center

From its historic beginnings in 1940, the National Naval Medical Center (NNMC) has grown to be one of the largest medical facilities in the country. As stated in the NNMC Vision:

The National Naval Medical Center is the Flagship of Force Health Protection and Operational Readiness, Outstanding Customer Service, Graduate Medical and Dental Education and Research, and World-Class Health Care within an Integrated System. Its primary mission is to provide quality health care to military members, their families and many of the Nation's leaders.

NNMC's mission is multifaceted as outlined below (*NNMC*):

As the Flagship of Navy Medicine:

- We provide the Nation's best casualty care
- We maximize readiness and promote wellness for our uniformed services (staff, patients)
- We provide quality patient- and family-centered care
- We develop and export innovation in healthcare
- We lead the way in integration in the NCA healthcare system

- We provide robust education and professional development programs
- We serve as a resource for homeland defense and humanitarian assistance
- We care for the President and the Nation's leaders

1.2.3 Walter Reed National Military Medical Center

As NNMC and WRAMC realign to form the Walter Reed National Military Medical Center (WRNMMC) at Bethesda, the shared future vision is clear. Delivered by Maj Gen Kenneth L. Farmer Jr. (WRAMC) and Rear Adm Adam M. Robinson (NNMC) and approved in June 2006 this vision is still strong and supported by the current commanders, Maj Gen Carla Hawley-Bowland (WRAMC) and Rear Adm Richard Jeffries (NNMC) and the support of Dr Charles Rice (USUHS President), and Brig Gen Tom Travis and Maj Gen Gar S. Graham (79th Medical Wing commanders at Andrews AFB).

"We envision and are committed to one integrated health system that leverages the assets of all DoD health care treatment facilities in the National Capital Area (NCA). The tri-service Walter Reed National Military Medical Center at Bethesda will be a worldwide military referral center and together with the Uniformed Services University of Health Sciences (USUHS) will represent the core of the integrated health system. All tri-service facilities in the NCA and USUHS will serve as a premier academic medical system focused on delivering the highest quality care, distinguished health professional education, and exemplary clinical and translational research."

1.3 Planning Methodology

The Master Plan for NNMC focuses on requirements projected through the next 10 years. It supports the strategic goals of NNMC and the realignment of services from Walter Reed Army Medical Center as well as additional anticipated growth. In order to begin the master planning process, the team reviewed existing documentation available to include previous Master Plans and updates, real property records, campus maps, archeological data, as well as multiple independent studies and facility assessments. Information on vision and mission, personnel, services, and facilities were gathered and reviewed from multiple sources.

The Master Plan is a living document and must be updated periodically to capture the inevitable changes of such a large and dynamic organization. Because of its location within the National Capital Area (NCA), the Master Plan is also reviewed by the National Capital Planning Commission (NCPC) which requires periodic reviews and updates.

The Master Plan is intended as a guide for future growth and development of the Bethesda campus. It is based on analysis of existing opportunities and constraints. The overall objective of the Master Plan is to create a campus environment that can support the significant increases required to

create WRNMMC and growth anticipated beyond the WRAMC and NNMC realignment. Working within the existing campus fabric, the Master Plan strives to maintain and enhance the positive aspects of the campus.

The growth projected in the Master Plan is based on the best information available through government facility and programming channels. However, there are many factors that could change these assumptions to include policy changes, funding streams, political environment, and many others. The Master Plan provides an organized framework for the anticipated growth that is flexible enough to adapt to these inevitable changes.

A team of planners, architects and engineers conducted facility assessments and met with personnel from engineering to ensure a current understanding of conditions and infrastructure in the planning process. During the course of several visits, the team evaluated every facility on the campus from a global perspective to determine its current condition, general utilization and potential.

1.4 Program Basis

Because of the significance of BRAC 2005, it formed the basis of the program needs. The users also identified additional support functions that were not part of the BRAC but were necessary to support BRAC decisions. A multitude of offices and personnel at both WRAMC and NNMC were tasked with evaluating the impacts of BRAC to ensure the details of the requirements were accommodated along with the necessary support not specifically identified in BRAC. These requirements were identified for inclusion in the Master Plan by a variety of sources based on their analysis.

In addition to BRAC direct requirements and BRAC support, potential growth was also anticipated in areas not directly related to BRAC but based on future projections. An increase of approximately 36% in facility space is anticipated as a result of the requirements identified, based on 4.7M SF in existing facilities.

Current growth projections are for an increase of 2,200 staff personnel based on BRAC requirements and an additional 300 staff personnel for anticipated non-BRAC related growth. An additional 484,000 patients and visitors are expected as a result of this growth. Space to accommodate this growth was developed and provided in terms of additions and new construction for the Master Planning effort.

Table 1.4 Projected Growth through 2016

Projected Growth through 2016		
	Campus Personnel	Patients/Visitors
Current	8,000	497,000
2011 BRAC completion	10,200	981,000
2016 Future Growth	10,500	981,000

While these figures state an overall position, it was necessary to reasonably distribute the anticipated total population of staff, as well as patients, and visitors, throughout the campus for purposes of utility and transportation modeling in the master plan. While there are individual figures for existing staff, outpatient visits, student population, etc, and there are estimates for the growth anticipated, there is not a database to distribute these figures throughout the entire campus. For this effort, available figures were considered and then a reasonable square foot/person figure was used based on the overall function of the facility, code and engineering judgment for existing facilities as well as proposed growth.

The Master Plan update identifies a plan to accommodate this growth through land use planning of the proposed facilities, and evaluation of the parking, transportation and utility infrastructure.

1.5 Planning Objective

While NNMCMC, or the future WRNNMCMC, is not strictly an academic campus, the term campus is appropriate in that it is an area of multiple agencies, buildings and spaces designed to work together. A campus represents a sense of unity, identity, and common purpose, within an environment that is easily accessible, and appropriate in scale and density; all characteristics of NNMCMC and the future WRNNMCMC. Given the desired campus outcome, the Master Plan provides direction for long term growth, consistent with the overall mission, while allowing phased development through individual projects.

The overriding planning objectives in the development of the master plan were as follows:

- *Support the Medical Mission*
- *Flexibility to meet future change*
- *Aspects of security*
- *Maintain/ enhance built and natural environment*
- *Preserve historic and natural resources*
- *Develop walkable campus*
- *Respect for surrounding neighbors*

The shared vision for the campus is clear the **Medical Mission** is the core purpose of the campus' being.

In any long-term plan, **flexibility** for future change is critical. A master plan is a living document that should be updated on a routine basis as requirements, programs and priorities inevitably change.

Federal Guidelines sets minimum standards for **security** of all DoD inhabited facilities. Known as Anti-Terrorism/Force Protection (ATFP), these standards are documented in UFC 4-010-01 Oct 2003 (rev Jan 2007), DoD

Minimum Antiterrorism Standards for Buildings, and must be considered in any planning effort. These standards represent a significant commitment by DoD to seek effective ways to minimize the likelihood of mass casualties from terrorist attacks against DoD personnel in the buildings in which they work and live. Security requirements will have major impacts on the overall design as structures are built or renovated.

Good stewardship requires planning efforts to maintain the existing built **environment** through the life of the facilities. Respect for the natural environment and enhancement of both the built and natural environments are part of the planning effort.

A key objective, particularly on a campus with such significant history as Bethesda, is recognition and preservation of the **historic and natural cultural resources**. The National Naval Medical Center Integrated Cultural Resource Management Plans (ICRMP), Oct 2002 was consulted for established recognition of these resources in the planning process.

A successful campus evokes a sense of community and is pedestrian friendly or “**walkable**” and has organized functional groupings with well-established wayfinding to provide easy access for users. The planning effort looked at ways to improve the safety and desire for individuals to walk on the campus. Density, functional groupings, wayfinding and streetscape are all tools to be addressed that encourage the objectives of a walkable campus environment. This planning objective also addresses the overall goal of incorporating features that enhance green design features and support LEED (Leadership in Energy and Environmental Design) and sustainability initiatives.

A variety of land uses are adjacent to the campus perimeter. It is paramount that the planning efforts within the campus recognize and **respect** these land uses and mitigate negative impacts to **surrounding neighbors**.

1.6 Description of the Master Plan Concepts

While the Master Plan Update accommodates significant growth due to BRAC 2005, the concepts of the plan remain true to the 1990 Master Plan and previous planning efforts on the Bethesda campus.

In terms of functional relationships, the division of land use will remain essentially the same with patient care medical functions in the center as the heart of the campus, and support, community, housing, education, and research functions outside of this primary core. Permanent housing will remain in the northern portion of the campus with dormitories to the northwest and limited family housing units further east. Retail and community services will generally remain at the south end of the campus. The University will remain in the southeast quadrant. Central Plant and logistics will remain to the east of the central medical core with warehousing and minimum use functions in the most remote northeast location.

Enhanced open area and emphasis of the green spaces will continue to be a priority concept, especially in terms of the association with evidence-based design. Enhancement of strong pedestrian links will focus on pockets of green space within the built environment.

The massing and structural organization of the campus will remain focused on Building 1, the historical tower that is the central element and most recognized feature of the entire campus. Any proposed construction must maintain the importance and significance of this feature. Heights of new construction will be compatible with adjacent structures and be sensitive to the surrounding community.

The existing roadway system to include the loop around the medical core of Buildings 1 through 10 is an organizing feature of the campus that will be maintained. Recommendations for improvements to the roadway system are included to allow increased access to proposed growth areas. Additional parking will be distributed, rather than centralized, to maximize access to areas of identified growth. Improvements to pedestrian routes and informal paths will encourage the idea of the “walkable” campus.

Anticipated growth was evaluated against the existing utility infrastructure. Recommendations were made based on existing information available, discussions with local utilities, NNMC infrastructure managers, and computer modeling.

The campus is currently a fenced secure complex with access points from Wisconsin and Jones Bridge Road. The security of the campus will be maintained and enhanced with improvements to the existing entry points.

2. OVERVIEW AND PROGRAM REQUIREMENTS

This chapter includes authorization and contractual information and the general purpose and scope of the Master Plan Update. It also includes historical and organizational background, identifies the planning approach to include goals and objectives, summarizes the requirements and discusses the relationship of the update to other related efforts.

2.1 Authorization and Applicability

This Master Plan focuses on the NNMC Bethesda campus to ensure logical development of the requirements identified by BRAC and supporting organizations and allow for logical growth beyond the BRAC implementation. It looks at the existing constraints and opportunities on the campus and develops a framework for orderly development.

The NNMC Master Plan Update was contracted through NAVFAC Washington under an Indefinite Quantity Contract for Facility Planning and Master Planning Components, Various Locations, A/E Contract #N62467-01-D-0328.

2.2 Purpose and Scope of the NNMC Master Plan Update

While the master plan efforts provided the basis for the EIS, the publication of the Master Plan Update intentionally lagged behind the EIS to ensure ample opportunity for community organizations and public review through the NEPA process. Results of these reviews were then incorporated in the Master Plan documentation.

The BRAC 2005 requirements identified a large influx of personnel, services and facilities that had to be accommodated within a long range plan or framework for NNMC. Support requirements and growth in other areas was anticipated as well and had to be considered as part of the total requirements. With this large growth as the impetus, NNMC began the process of identifying the requirements to update the Master Plan.

2.3 Historic Overview and Background

2.3.1 National Naval Medical Center

NNMC has been at its current location in Bethesda since 5 February 1942, but the presence of Navy Medicine in Washington DC started long before that. Beginning with the War of 1812, the first naval medical facility in the Washington D.C. area was established in a rented building near the Washington Navy Yard. That facility was replaced by another at the Navy Yard and later, in 1843, yet another at the Marine Barracks at 8th and I Streets. At the beginning of the Civil War, these existing accommodations were declared inadequate, and a temporary naval hospital was established at the Government Hospital for the Insane what is now part of Saint Elizabeth's Hospital campus. In 1866, Congress appropriated funds for the construction of a 50-bed naval hospital on Pennsylvania Avenue, SE,

in Washington, D.C. In October 1906, the Naval Hospital at 23rd and E Streets was established at the present site of the Bureau of Medicine and Surgery. It Became the Naval Medical Center in 1935. At that time, the Center consisted of the Naval Hospital and the Naval Medical School.

The history of the present location for NNMC began in 1938 when Congress appropriated funds for the purchase of land for a new Naval Medical Center. The site was selected by President Franklin D. Roosevelt on 5 July of that year. He selected the site, a 250 acre farm on one of the older land-grant parcels in Maryland, because of the spring fed pond that reminded him of the Biblical reference to the Pool of Bethesda, a place of healing. He not only selected the site, but President Roosevelt also initiated the idea for the building design. He had been impressed with the design of the Lincoln Nebraska state capitol building, and sketched an elevation and ground plan of what he envisioned for the Naval Medical Command in 1937. From these sketches, and under the close supervision of the noted architect Paul Philippe Cret, evolved the 20 story high rise tower symbolic of NNMC with dramatic vertical lines in art deco style. Ground was broken for the tower on 29 June 1939. President Roosevelt laid the cornerstone for the new structure on 11 Nov 1940. On 5 February 1942, the Naval Medical Command, National Capital Region (NNMCNCR) was commissioned. It was dedicated by President Roosevelt on 31 August 1942, the 100th anniversary of the Bureau of Medicine and Surgery.

The original pond that led to the site selection is still located directly in front of the tower and has been christened Lake Eleanor in honor of Mrs. Roosevelt.

The original Center included a Naval Hospital with 1,200 beds, the Naval Medical School, the Naval Dental School, and the Naval Medical Research Institute.

During World War II, numerous temporary facilities were constructed to meet the immediate health care needs of up to 2,500 sailors and marines. Since that time, there have been significant changes as the mission of the medical center has expanded.

The campus continued to grow with the establishment of the Naval School of Hospital Administration in 1945, the Navy Toxicology Unit of the Armed Forces Radiobiology Research Institute in 1961, the Naval Medical Data Services Center in 1965, and the Naval Medical Research and Development Command in 1974.

In August of 1960 Buildings 7 and 8 were added to the east side of the original tower to provide 258 beds and replaced the temporary wards.

In 1973 the mission grew to provide coordinated dispensary health care services as an integral element of the Naval Regional Health Care System, bringing all the health facilities within the Naval District of Washington under the Medical Center Commander. To meet this mission growth, in the mid 70's an extensive construction program began. Building 9, a large

4 story outpatient facility, and Building 10, a seven story 500 bed inpatient tower, were constructed to the south of the original facilities adding more than 880,000 square feet (SF) to the Medical Center. In the late 70's, two multi-level parking garages were constructed east of the medical buildings for staff and visitors.

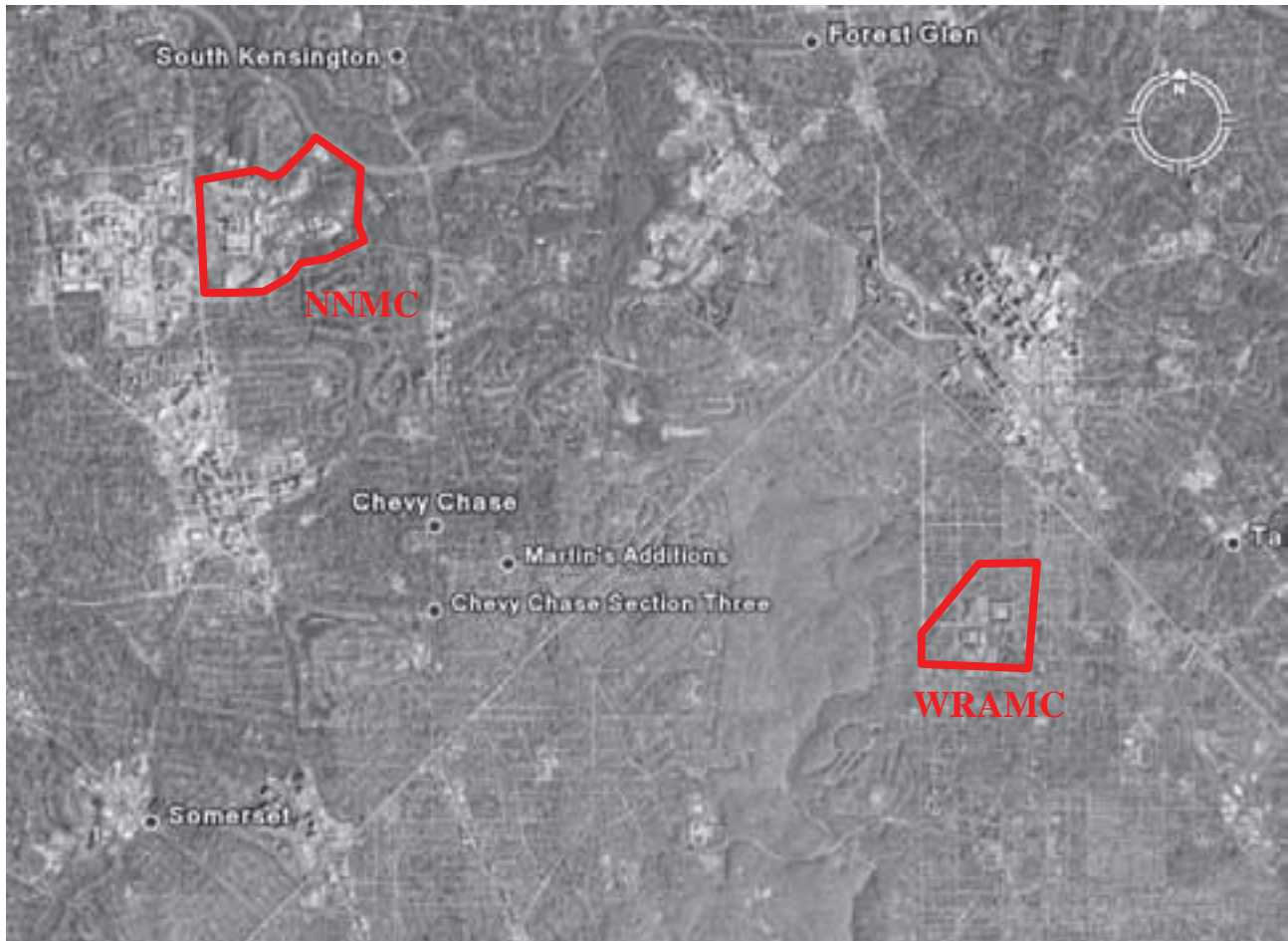
The strong history of the campus was recognized when the original hospital tower was added to the Registry of Historical Places by the U.S. Department of the Interior in 1977. Other structures have historic significance as well and a historic district on campus is recognized by the Maryland Historic Trust.

2.3.2 Walter Reed Army Medical Center

Walter Reed Army Medical Center is located in Washington D.C., approximately 6.5 miles from the National Naval Medical Center in Bethesda. (Figure 2-1 NNMC and WRAMC location map) The Army also has a long history in the Washington DC area with efforts to construct a general hospital with a training school as early as 1862 during the Civil War. It was not until 1893, however, that the Surgeon General was successful in establishing the Army Medical School.

In 1903, a committee was appointed to look for appropriate land within the District of Columbia for the erection of a general hospital. From 32 available tracts of land that were considered, they eventually chose what was known as the "Cameron tract". This tract was well elevated and was situated near two street car connections, close to the Army medical school, and less than a mile from the railroad, all of which were considered the ideal setting.





NNMC
Master Plan
Update 2008
Bethesda Campus

Figure 2-1

NNMC and WRAMC
Locations

In December of 1908, the main building, Building 1 was completed. Less than 30,000 SF, it was intended primarily for administrative purposes and had a bed capacity of only 65 beds. Building 2, the hospital stewards' quarters, was completed a few months later in April 1908, followed by Bldg 3 as a second set of quarters. On 1 May 1909, with only three buildings constructed, the Walter Reed General Hospital (WRGH) opened to receive patients. The hospital was named in honor of Major Walter Reed, an Army surgeon and researcher.

Additional buildings continued to be constructed on the site, to include a storehouse, stable, wagon shed, barracks for the enlisted, captain's quarters, mortuary, nurse's home, and an isolation hospital. After the initial 13 buildings were complete in 1913, construction began on additions for the main building and nurses' home.



In 1917, because of requirements from WWI, WRGH initiated an expansion that continued for the next three years in order to meet its role as a general Army hospital, the post hospital for Washington Barracks, and the several camps in the vicinity. Twenty additional temporary frame buildings were constructed in 1917 bringing the bed capacity to 950. At that point three additional parcels of land had to be purchased to continue the construction and by the end of 1918, the bed capacity was 2,500. In 1923 General Pershing signed the order creating the Army Medical Center (AMC) within the same campus as WRGH, the Army Medical School moved to the campus and was renamed the Medical Department Professional Service School (MDPSS). In 1951, the entire complex of approximately 100 brick buildings was renamed the Walter Reed Army Medical Center (WRAMC).



WRAMC functions continued to grow and in June 1955 the Armed Forces Institute of Pathology (AFIP) was established on campus. To meet the growing requirements, in 1972, a large new building began construction and was finished and occupied in 1977. In addition to the Medical Center, the Walter Reed installation includes the North Atlantic Regional Medical Command (NARMC), and many other tenant organizations.

Today the 113 acre campus serves more than 150,000 active and retired personnel with over 8,000 staff on the main campus.

With BRAC 2005, WRAMC will close in Sep 2011. The future disposition of the property is still being evaluated. State departments and federal agencies are investigating the potential of using portions of the property, as well as other interested parties.

As part of the realignment of some services from WRAMC to NNMC, it is important that the organizations responsible for the realignment, recognize the history of both organizations and to strive to look for a way to incorporate elements of that history in the implementation of the new WRNMMC. As the execution is developed, consideration should be given to the relocation of significant element(s) from WRAMC to an appropriate location(s) at NNMC to incorporate a physical piece of WRAMC and its strong history to the new WRNMMC campus.

2.4 The NNMC Organization

2.4.1 National Naval Medical Center

As it exists today, the National Naval Medical Center is one of the Navy's largest health care delivery systems. As the headquarters for the regional Health Care System, NNMC encompasses facilities in five states (Virginia, Maryland, Pennsylvania, West Virginia and New Jersey) and the District of Columbia.

NNMC falls under the regional command of Navy Medicine National Capital Area. A single commander serves for both the regional command and the National Naval Medical Center. Resources and technical support are from the Navy Bureau of Medicine and Surgery commanded by the Surgeon General of the Navy.

NNMC is organized in functional Service Lines with direct lines to the Board of Directors. A brief list is included below:

Command Directorate

- Commander
- Deputy Commander
- Command Master Chief
- Commander OHSU NNMC
- Professional Affairs
- Secretariat

Board of Directors

- Director of Military and Family Health
- Director of Medical-Surgical Services
- Director of Clinical Support Services
- Director of Health Care Operations and Planning
- Director of Administration
- Director of Resources
- Director of Communications and Customer Care

- Director of Graduate Education and Research
- Director of Branch Health Clinics
- Chief of Clinical Staff
- Chief of Nursing Staff
- Civilian Staff Representative

Special Assistants

- CO, USNS COMFORT
- American Red Cross
- Chief Information Officer
- Command Casualty Affairs Office
- Drug and Alcohol Program Advisor
- Equal Opportunity
- Military Family Ombudsman
- Navy and Marine Corps Relief
- Organizational Ombudsman
- Pastoral Care
- Safety Office (OSHA-Facilities)
- Safety Dental Executive
- Special Projects Officer
- Staff Judge Advocate

The Medical Center provides primary care, specialty care, and tertiary care through multiple clinics and departments, some of which are located throughout the region. As of 2004, the National Naval Dental Center is also aligned with the National Naval Medical Center.

An important command for NNMCMC and the entire NCA medical region is the Joint Task Force National Capital Region-Medical (JTF CapMED). JTF CapMed was established in Sep 2007 to help navigate and implement the BRAC integration for Navy, Army and Air Force medical treatment facilities in the National Capital Region and is located on NNMCMC. The command coordinates resources from military branches to eliminate redundancies, enhance clinical care, promote health education, joint training and military medical research opportunities. The task force will also implement the BRAC changes, oversee the construction at Bethesda and develop an improved regional medical disaster response system. The command will be fully operational in Sep 2008 with approximately 150 personnel.

In addition to the primary mission of the Medical Center, a wide variety of health care, educational and medical research programs exist on the campus creating interrelated operations and shared services through multiple tenants on the Bethesda campus. Some of the more significant tenants and a brief description of their missions are listed below. (NNMCMC).

American Red Cross. The American Red Cross, a humanitarian organization led by volunteers and guided by its Congressional Charter and the Fundamental Principles of the International Red Cross Movement, will provide relief to victims of disaster and help people prevent, prepare for, and respond to emergencies. Nearly 200 volunteers are part of the Red Cross at Bethesda.

Armed Forces Radiobiology Research Institute (AFRRI). Chartered in 1961 to study the biological effects of ionizing radiation, the Institute's mission today focuses on development and applied research leading to effective medical countermeasures against ionizing radiation. AFRRI works with government facilities, academic institutions and civilian laboratories in the U.S. and other countries to find ways of treating and managing radiation injuries.

Human Resource Office. The Human Resource Office provides advice and guidance on standard personnel issues such as recruitment, classification, training and equal employment relations.

Medical Inspector General (IG). Provide health services to all beneficiaries in wartime and peacetime as authorized by law.

Moral Welfare and Recreation (MWR). MWR has a robust program on NNMC for military dependents and NNMC civilian employees. An MWR Info Center, Bowling Center, Comfort Zone (Fitness Center), Liberty Zone (Club for Single or Unaccompanied Sailors), Child Development Center, and USUHS Café are some of the services provided on campus through MWR.

National Cancer Institute (NCI). The National Cancer Institute coordinates the National Cancer Program, which conducts and supports research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer, rehabilitation from cancer, and the continuing care of cancer patients and the families of cancer patients.

Naval Dosimetry Center (NDC). The Naval Dosimetry Center provides centralized radiation dosimetry processing and consultation service to Naval commands worldwide. NDC maintains a registry of ionizing radiation exposure data for Navy and Marine Corps personnel exposed to radiation sources in their work environment. Also, it provides operations conducted under the Navy's Master Material License from the Nuclear Regulatory Commission listed in NAVMED P-5055.

Navy Medicine MPT&E Command. The Navy Medicine Manpower, Personnel, Training and Education (MPT&E) Command supports the Navy's priority of developing leaders for Navy Medicine. The command provides Operational and Peacetime education, training, visual information and program management for officers and enlisted personnel in support of DoD health care.

Navy Exchange. The NEX mission is to provide customers quality goods and services at a savings, and support quality-of-life programs. In addition to the main exchange, NEX provides personalized services, optical shop, barbershop, laundry and dry cleaning services, tailor shop, NEX gas station and QuikMart, uniform center, flower service and package store. They also are responsible for the Main Street eateries and vendors as well as the 106 room Navy Lodge.

Navy Legal Services. The Legal Services mission is to provide legal services to active duty service members and their dependents, reservists, and to retirees. They provide legal services to support fleet operational readiness. The highest priority is given to fleet and operational units, particularly those deployed or preparing to deploy.

Naval Medical Research Center (NMRC). NMRC conducts scientific research on various diseases and operational problems in order to improve the health, safety, readiness and performance of Navy and Marine Corps personnel. NMRC is the Navy's largest biomedical research facility. It is being relocated off campus by separate BRAC action.

Navy-Marine Corps Relief Society (NMCRS). The Mission of the Navy-Marine Corps Relief Society is to provide, in partnership with the Navy and Marine Corps, financial, educational, and other assistance to members of the Naval Services of the United States, eligible family members, and survivors when in need; and to receive and manage funds to administer these programs.

Naval Medical Center for Organizational Development (NMCOD). The Navy Medicine Center for Organizational Development provides consultation, coaching, and training in strategic change and continuous performance improvement in organizations. Our goal is to promote optimal organizational performance throughout all Navy Medicine activities.

Naval Medical Information Management Center (NMIMC). The first of the Navy's Information Systems Agencies, NMIMC was established in 1965 as an Officer-in-Charge role under the Chief, Bureau of Medicine and Surgery (BUMED) to provide computer support. The Center links campus commands to worldwide locations through the Defense Data Network and the Navy's system of host contractors. Their mission is to plan, coordinate and provide comprehensive and cost-effective information management capacity throughout the world in support of Force Health Protection. The Agency is currently scheduled to relocate to San Antonio in the near future.

Personnel Support Activity Detachment (PSD). The PSD at the National Naval Medical Center provides one-stop pay, personnel, administrative and passenger transportation support to approx. 4,300 active duty and 1,100 reserve military personnel assigned to the medical center and 100 tenant and area commands in the D.C. area. Support is also provided to military dependents of assigned personnel, retirees in the mid-Atlantic region and passenger transportation to Department of the Navy civilians.

Retired Activities Office (RAO). Retired Activities Office provides several services, including helping family members of retirees with benefit information and paperwork, and providing pre-retirement briefings for active duty personnel. RAO also helps plan and conduct an annual RAO seminar and provide information on VA benefits, job referrals and relocation services.

Uniformed Services University of Health Sciences (USUHS or USU). The Uniformed Services Health Professions Revitalization Act of 1972, Public Law 92-426, established the Uniformed Services University of the Health Sciences (USUHS) to provide Continuity and Leadership and insure Medical Readiness for the Military Health System (MHS). It is the nation's only fully accredited federal school of medicine and school of graduate nursing. There are several centers within or associated with the University, some of which are listed below:

- Tri-Service Center of Oral Health Studies
- Center for Disaster and Humanitarian Assistance Medicine (CDHAM)
- Casualty Care Research Center (CCRC)
- Center for the Study of Traumatic Stress
- Center for Education and Research in Patient Safety (CERPS)
- Center for Health Disparities Research and Education (CHD)

2.4.2 Walter Reed National Military Medical Center

The new Walter Reed National Military Medical Center (WRNMMC) at Bethesda will be the core of an integrated military medicine system in the National Capital Area. The new NCA healthcare will be a fully integrated delivery system that combines the medical expertise of the Army, Navy, and Air Force. What was, at the time of the BRAC announcement in 2005, three medical centers, a small community hospital, and 19 clinics in the NCA, will become WRNMMC, a single tri-service medical center in Bethesda MD, a new large tri-service community hospital at Ft Belvoir in Northern Virginia, the Uniformed Services University (USU), and other treatment facilities and clinics in the NCA. At the heart of the delivery system will be WRNMMC at Bethesda, the U.S. Military's worldwide tertiary care, referral center for casualty and beneficiary care.

However, the realignment is much more than facilities. The functional integration of WRAMC and NMMC will be accomplished long before the construction is complete at the new WRNMMC in 2011. Integration of the services in the National Capital Area actually began by the services in the mid-1990's. Efforts to standardize the approach for care and protocols are ongoing with the formalized process. Executive oversight for the BRAC consolidation and medical integration is through the Commander Joint Task Force National Capital Area (JTF CapMed) which was established in Sept 2007. The Office of Integration (OI) and the Deputy Commanders for Integration (DCIs) at each institution also play key roles in the functional aspects of the realignment.

Organizations and Functions that will be included in the new WRNMMC are listed below. Medical services are organized under the user groups or service lines that have been used throughout the integration process.

Adult Primary Care:

- Emergency Medicine
- Executive Medicine
- Internal Medicine
- Family Practice
- Optometry
- Physical Exams

Behavioral Health:

- Family Advocacy
- Outpatient Integrated Adult
- Partial Hospitalization
- Preventive and Consultative Services
- Substance Abuse

Cancer Care:

- Breast Cancer
- Gynecology
- Hem and Onc Pharmacy
- Medical Oncology
- Prostate Center
- Radiation Oncology

Cardiovascular-Pulmonary:

- Cardiology
- Cardiothoracic Surgery
- Integrative Cardiac Health Program
- Interventional Imaging
- Pulmonary Clinic
- Respiratory Services
- Vascular Surgery

Children's' Health Services:

- Adolescent Medicine
- Armed Forces Center for Child Protection
- Behavioral Health
- Exceptional Family Member Program
- General Pediatrics
- Pediatric Hematology and Oncology
- Pediatric Sedation and Procedures
- Early Intervention
- Pediatric Subspecialty

Musculoskeletal:

- Amputee Center
- Chiropractic Services
- Occupational Therapy
- Orthopedic and Podiatry Clinic
- Orthotics and Prosthetics
- Physical Medicine and Rehab
- Physical Therapy
- Sports Medicine

Neurosciences:

- Defense and Veterans Brain Injury Center (DVBIC)
- Neurology
- Neurosurgery

Operational Medicine:

- Community Health Nursing
- Deployment Health
- Environmental Health
- Medical Readiness and Deployment
- Industrial Hygiene
- Occupational Health
- Preventive Medicine
- Pathology Department:
 - Anatomic Pathology
 - Blood Donor Center
 - Clinical Pathology
 - Infectious Disease Laboratories
- Transfusion and Pheresis Services

Pharmacy:

- Clinical
- Outpatient
- Inpatient
- Investigational Research

Radiology:

- Breast Care Center
- Health Physics and Radiation Safety
- Diagnostic Radiology
- Nuclear Medicine

Special Medical:

- Allergy and Immunology
- Dermatology
- Endocrinology
- GI and Virtual Colonoscopy
- Infectious Disease
- HIV Program
- Rheumatology
- Sleep Medicine
- Vaccine Healthcare

Surgery and Specialty Surgery Clinics:

- Audiology and Speech Pathology
- ENT
- General Surgery
- Nephrology
- Ophthalmology
- Plastic Surgery
- Transplant and Urology

Women's Health

- OB/GYN Clinic
- Reproductive Endocrinology
- URO/GYN Clinic

Operative Services:

- Anesthesia
- Central Sterile
- Main OR

Nursing Units:

- Medical
- Surgical
- ICU
- IMCU
- Behavioral Health

Chapel and Pastoral Care

Clinical Care Management

Clinical Investigations

Dental Services

- Dental Readiness
- Hospital Dentistry

Education and Training

- GME
- Hospital Education
- Medical Library
- Non-GME

Food Services

General Admin

- CDHAM
- Command Drug Screening
- Community Activities
- Housing Referral
- JAG
- Medical Center Brigade

NARCO

Naval Dosimetry

- NCIS
- Protective Medicine
- PSD/Company/Commands
- Reserve Operational Support
- Security and Public Safety
- 2290th US Army Hospital

Hospital Admin

- HPMO
- Managed Care/TRICARE

- Patient Admin
- Patient Appointments/Referrals
- Quality Management

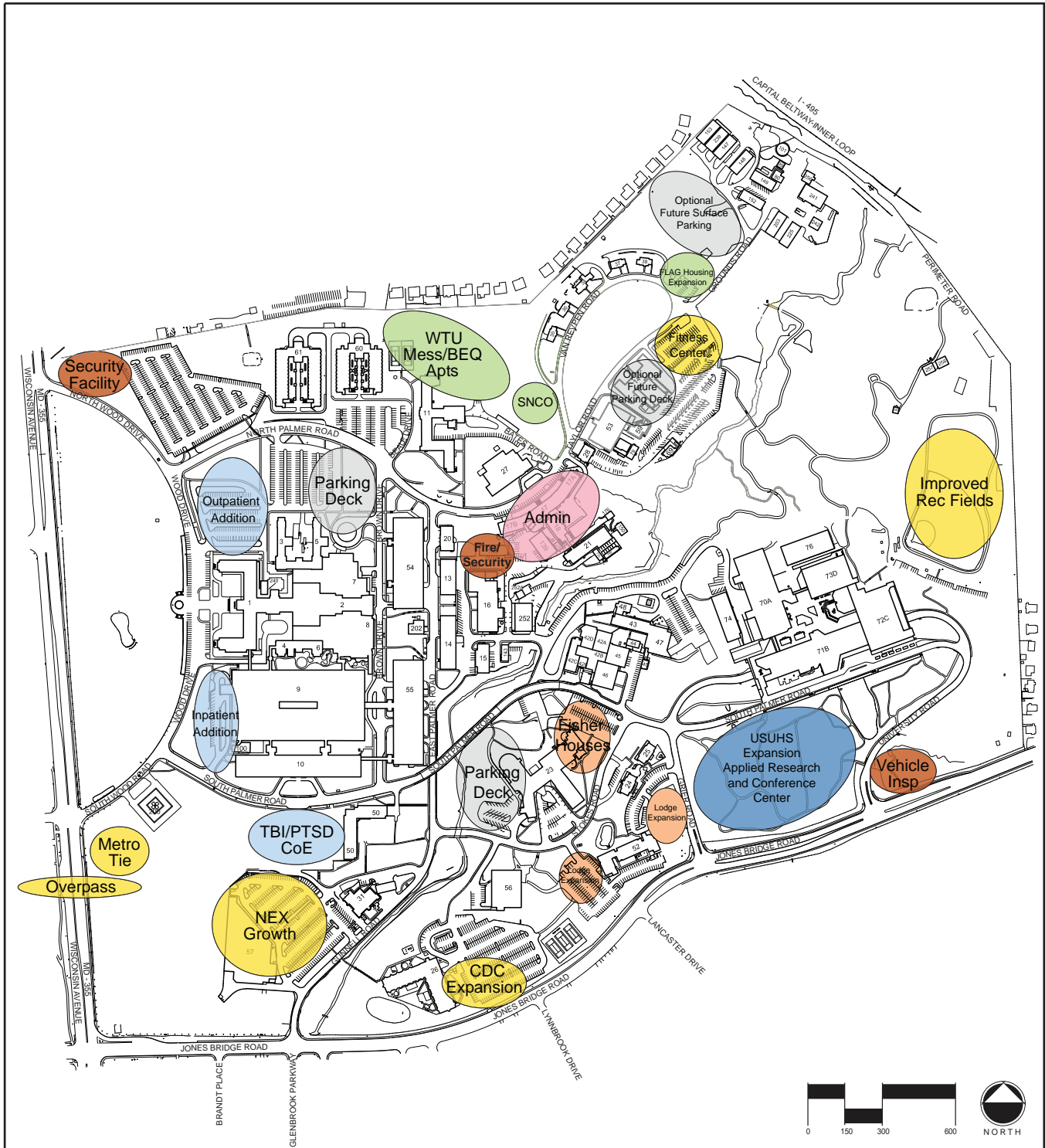
2.5 The Master Plan Goals and Objectives

NNMC has undergone several master planning efforts through the years, some more formalized than others. The most recent approved Master Plan was completed in 1990. The stated goals of the 1990 Master Plan were geared toward stabilizing patient care operations and increasing access to patient services. These goals were the result of projections of a 35% increase in military personnel and a 42% increase in civilians. At that time, the total personnel were expected to increase from 3,050 to 4,200 by FY94. Projections also included a 25% increase in annual outpatient visits across the board and an anticipated increase in the inpatients or Average Daily Patient Workload (ADPL) from 340 to 400. Utilizing an 80% occupancy rate, the ADPL increase generated a total bed count of 500 beds. While the increases in personnel have materialized and continued to grow to approximately 4,500 total current staff, the total bed count and ADPL have not. Advances in healthcare technology have reduced the number of admissions and increased the number of procedures that are done on an ambulatory basis. The current bed count is 257 and the ADPL for 2006 was only 128. However, now as a result of BRAC and the realignment of select services from WRAMC, making WRNMMC the only military medical center for the northern D.C. area, the additional patient care directed to NNMC is expected to increase the bed count requirements to 345 beds.

The focus of the 1990 Master Plan was a reorganization of existing medical facilities to better utilize the existing space and identify sites for proposed new construction throughout the campus within the established master plan framework. Much of that focus is still pertinent in this update.

For 2008, the established functional relationships will remain and future developments will continue within the established six broad land use patterns. (Figure 2-2 Proposed Functional Relationships) The medical functions will continue to be located within the “medical core” of the campus, the inner circle defined by Wood Road to the west, and Palmer Road North, East, and South as defined by the geographic road designations. This is the functional core, the epicenter of activity for patient care, and the heart of the campus. Housing will continue to be developed in the northern portion of the site, to include Bachelor Enlisted Quarters (BEQs), single family dwellings, and Warrior Transition Units, which will house personnel and families while they are recuperating from injuries sustained during their service. The southern portion of the site will continue to focus on community services to include non-permanent party or transient housing, retail, and support functions. The far northeast portion of the campus currently houses “back of the house” storage and support functions that do not require patient or visitor access and minimal day to day interface with the rest of the campus. Recreation use along the east side of the campus will continue, taking

MASTER PLAN
NATIONAL NAVAL MEDICAL CENTER
BETHESDA, MARYLAND



NNMC
Master Plan
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Bethesda Campus

- MEDICAL
- ADMINISTRATION
- PERM PARTY HOUSING
- COMMUNITY SERVICES
- RESEARCH

- EDUCATION
- TEMPORARY HOUSING
- SECURITY
- PARKING

Figure 2-2

Proposed
Functional
Relationships

advantage of the natural resources and providing an appropriate adjacency and buffer for neighboring recreational and residential uses. Development in the southeast will focus on requirements anticipated for growth related to USUHS (Uniformed Services University of Health Sciences), the largest tenant on the campus that is an integral part of the medical mission. While intended functional areas are defined in the Master Plan it is expected that minor deviations in actual building placement will occur as specific projects are identified.

Areas of green open space will remain throughout the campus drawing from the significant natural resources and beauty of the campus, to include Stoney Creek which bisects the site from the southwest to the northeast. A large forested area exists in the northeastern and southeastern portions of the site to include portions of Stoney Creek. Appropriate focus of this area is included in the planning efforts. The natural spaces created by the creek and the forested areas will be integrated in the campus plan.

In terms of massing, the historic tower, will remain the focus of the campus as the tallest structure. It is important and recognized that any changes to the campus or any buildings do not detract from this focal point and its significant mark on history. Proposed growth will not compete with the tower but will enhance its strategic position.

2.6 Master Plan Update Format

The Master Plan Update includes six chapters.

Chapter 1 - Executive Summary.

Chapter 2 - Program Requirements. This chapter includes authorization and contractual information and the general purpose and scope of the Master Plan Update. It also includes historical and organizational background, identifies the planning approach to include goals and objectives, summarizes the requirements and discusses the relationship of the update to other related efforts.

Chapter 3 – Community Context. This includes regional and local information to include some local history, resources and the relationship of the NNMC campus to adjacent communities. It describes review organizations and those interested in the process from a community perspective.

Chapter 4 – Existing Conditions on NNMC campus. This is a discussion of existing constraints and opportunities and built and natural environmental features of the campus that affect future development to include climate, land uses, utilities, historical and archaeological elements, and physical characteristics and limitations of the campus.

Chapter 5 – Master Plan Development Plan. This includes future development of the campus with summaries of the existing facilities, anticipated growth and proposed direction in terms of land use for that development. Requirements for BRAC 2005 and additional requirements, in terms of BRAC support and other potential development, are included. The current status of ongoing efforts is described along with modifications

resulting to the master plan where applicable. Refinements will continue to occur throughout the design processes, but this chapter provides a general development direction.

Chapter 6—Development Guidelines. This includes general recommendations to incorporate in specific projects as the campus continues to develop to improve and provide a consistent character throughout the campus.

Appendix – Separate appendix containing the Traffic Management Plan and the Building Assessments of the individual campus buildings.

2.7 Summary of Program Requirements

Following the BRAC 2005 announcement to realign services from Walter Reed to Bethesda, teams of subject matter experts from both Army and Navy met on a regular basis to integrate their areas of focus and develop an integrated Business Plan to determine the requirements of integration and realignment.

The following is the current list of the requirements identified for the Master Plan. The list includes BRAC requirements as well as other potential developments:

- Additional space for inpatient and outpatient medical care as well as renovation of existing medical space.
 - Approximately 690,000 SF addition
 - Approximately 317,000 SF renovation
- A National Intrepid Center of Excellence for Traumatic Brain Injury and Psychological Health (NICoE)
 - 80,000 SF
- Parking structures for a total of roughly 2,500 cars
- Medical Administrative Space
 - Approximately 60,000-100,000 SF
- Clinical and Administrative Space for the Warrior Transition Unit (WTU)
 - 5,000 SF Clinical space (included in the 690,000 SF medical care)
 - 41,000 SF Administrative Space (included in the 317,000 SF renovation)
- Billeting to accommodate an increase in permanent party
 - Approximately 300 new rooms to include 80 WTU requirements
 - A new 21,000 SF dining facility for WTU
- SNCO Housing
 - New units (townhouse style)

- Lodge Expansion
 - Additional rooms
- Fisher Houses
 - New 21 room houses
- Applied Medical Research Facility
 - 150,000-200,000 SF
 - 450 parking spaces
- USUHS President's House
- Additional Child Care Facilities
 - Hourly Drop Off Center 8,000 SF
 - Night Care Facility 4,000 SF
- Gym/Fitness Facility
 - Approximately 120,000 SF
- Navy Exchange (NEX)
 - 75,000-150,000 SF
 - Associated structured parking
- Transportation and Security Improvements
 - 1,000 SF Pass and ID facility
 - Commercial Vehicle Inspection Station
 - Gate and Road Improvements

Summary of Site Data

The chart below lists significant statistics of growth over the duration of the planning period to 2016.

Table 2.8 Summary of Site Data

Summary of Site Data		
	Existing	2016
Site		
Total Acreage	243 acres	243 acres
Total Campus Personnel	8,000	10,500
Annual Patients and Visitors	497,000	981,000
Building Areas	4,700,000 SF	6,350,000 SF
Parking Spaces		TMP
Surface Lots	2,735 spaces	
Structured Parking	3,087 spaces	
Street Parking	236 spaces	

2.9 Planning Premises and Program

2.9.1 Population

Current estimates indicate personnel will increase by approximately 2,500 during the master planning period, from approximately 8,000 campus wide in 2005 to 10,500 by 2016. The BRAC driven personnel increase is 2,200 and an additional 300 is anticipated in support areas. In addition to the staff, annual patient and visitors are expected to increase from 497,000 in 2005 to approximately 981,000.

2.9.2 Program Basis

The Program Basis for the Master Plan included all anticipated requirements. The most significant was the BRAC requirements to realign WRAMC and NNMC. The requirements for this portion of the program are the overriding premise for the Master Plan and were identified through multiple committees and independent studies. As they were developed, they were provided to the master planning team for incorporating in the Master Plan.

Additional requirements for existing functions on the campus that were not affected by the BRAC consolidation were identified throughout the process by various users and identified to the planning team.

The Master Plan provides a framework to accommodate these needs. Based on the requirements identified, the campus will potentially grow from approximately 4.7 million gross square feet (GSF) to approximately 6.4 million GSF, an increase of about 1.7 million GSF or an increase of approximately 36%. Additional growth is identified as potential projection only and is not currently programmed, so the actual figures may vary. The framework for development includes some key concepts.

- Development to accommodate the growth in population should follow existing land uses and building functions wherever possible to ensure efficiency of operation for both staff and patients.
- The forested areas around Stoney Creek should be preserved and respected as a central feature of the campus. The established perimeter buffers should remain to the greatest extent possible.
- The historical significance of Building 1, the Tower, should be respected and construction within the medical core should enhance its setting as the showpiece of the campus.
- Expansion of medical functions should be located within the medical core area or convenient to this central hub.

- New requirements should be met with a combination of new construction at previously developed sites, redevelopment of existing structures, and renovation to the greatest extent possible.

2.9.3 Security Considerations

One of the important planning premises at NNMC is security. Perimeter security, gate access queues, vehicle inspection areas, setback requirements from the installation perimeter, roads and parking all must be considered in planning for the proposed development. Anti-terrorism requirements as established in UFC 4-010-01 Oct 2003 (rev Jan 2007), DoD Minimum Antiterrorism Standards for Buildings are an important basis for security considerations.

2.9.4 Transportation and Circulation

Transportation access and circulation is an important component of the Master Plan. Key planning principles which support the campus transportation-land use relationships and form the basis for master plan transportation recommendations, include the following:

- Development for increased growth will be in concert with the existing road system.
- Additional structured patient parking will be provided in close proximity to the expanded medical facilities and areas of future development.
- Currently programmed changes to the existing gates will enhance access and security.
- Impacts of campus growth will be mitigated on the surrounding communities to the greatest extent possible.
- Shuttle services within the campus will continue and be expanded as development increases.
- A pedestrian friendly atmosphere will be encouraged.
- The Transportation Management Plan (TMP) will be integrated in the development of the campus.

2.10 Relationship to Other Efforts

As a Federal action, the Walter Reed National Military Medical Center project is subject to the National Environmental Policy Act (NEPA) process.

A key component of the NEPA process is the Environmental Impact Statement (EIS). The purpose of the EIS is to provide a systematic and interdisciplinary approach to planning and decision-making by ensuring that the information related to the impacts of a Proposed Action on the human and natural environment is available to decision makers and citizens before making decisions.

In order for the results of the EIS process to be incorporated in the Master Planning efforts, the Master Planning timelines were aligned to follow the NEPA and EIS process.

3. COMMUNITY CONTEXT OF THE BETHESDA CAMPUS

This chapter includes regional and local information to include some local history, resources and the relationship of the NNMC campus in the county and adjacent communities. It describes review organizations and those interested in the process from a community perspective.

3.1 Montgomery County

NNMC is located in Montgomery County, Maryland, one of the largest and fastest growing jurisdictions in the Washington, D.C. region. (Figure 3-1 National Capital Region Map) According to the U.S. Bureau of Census population estimates, Montgomery County ranks 1st in Maryland and 39th in the nation by absolute population gain from 2000 to 2003. The land area is approximately 497 square miles or 321,300 acres. In the last 40 years the amount of developed land in the county has increased significantly. When Montgomery County's farms started to disappear, in the later part of the twentieth century, a plan was developed to preserve the county's historic farmland, through the foresight of community planners. This planning established the basic concept development, "Year 2000 Policies Plan", for the entire Washington region. Based on this plan, future regional development was to be, and remains, a series of corridors separated by open-space wedges, radiating from the central core of Washington, D.C. In 1964, a plan was prepared for the Montgomery and Prince Georges Counties' portion of the Washington region by the Maryland – National Capital Park and Planning Commission (M-NCPPC). The "Wedges and Corridors" development was concentrated along transportation corridors in order to retain green "wedges" in between creating the regional land use pattern after which it was named. (Figure 3-3 County General Plan Wedges and Corridors) (NRDC)

NNMC is located in a concentrated growth transportation corridor in the southeastern portion of the county, very close to the District of Columbia. (Figure 3-2 Vicinity Location Map) This corridor is known as the Rockville-Bethesda corridor. It is one half mile south of Interstate 495 and one mile north of Bethesda's central business district.

NNMC is located in an area designated as a Consolidated Metropolitan Statistical Area (CMSA), an area defined by the Federal Office of Management and Budget (OMB) for use by Federal statistical agencies. An area is designated as a CMSA if it meets the requirements to qualify as a metropolitan statistical area (MSA), has a population of 1,000,000 or more, component parts are recognized as primary statistical metropolitan areas (PMSAs). The CMSA, of which Montgomery County is included, encompasses both the Baltimore and Washington metropolitan areas, embracing an area of nearly 9,600 square miles circumscribed by a 75-mile radius around downtown Washington, D.C. It includes communities from the Pennsylvania border to Calvert and Charles Counties in southern Maryland and on southward in Virginia to Fredericksburg and Spotsylvania County (nearly to the edge of metropolitan Richmond). From Queen

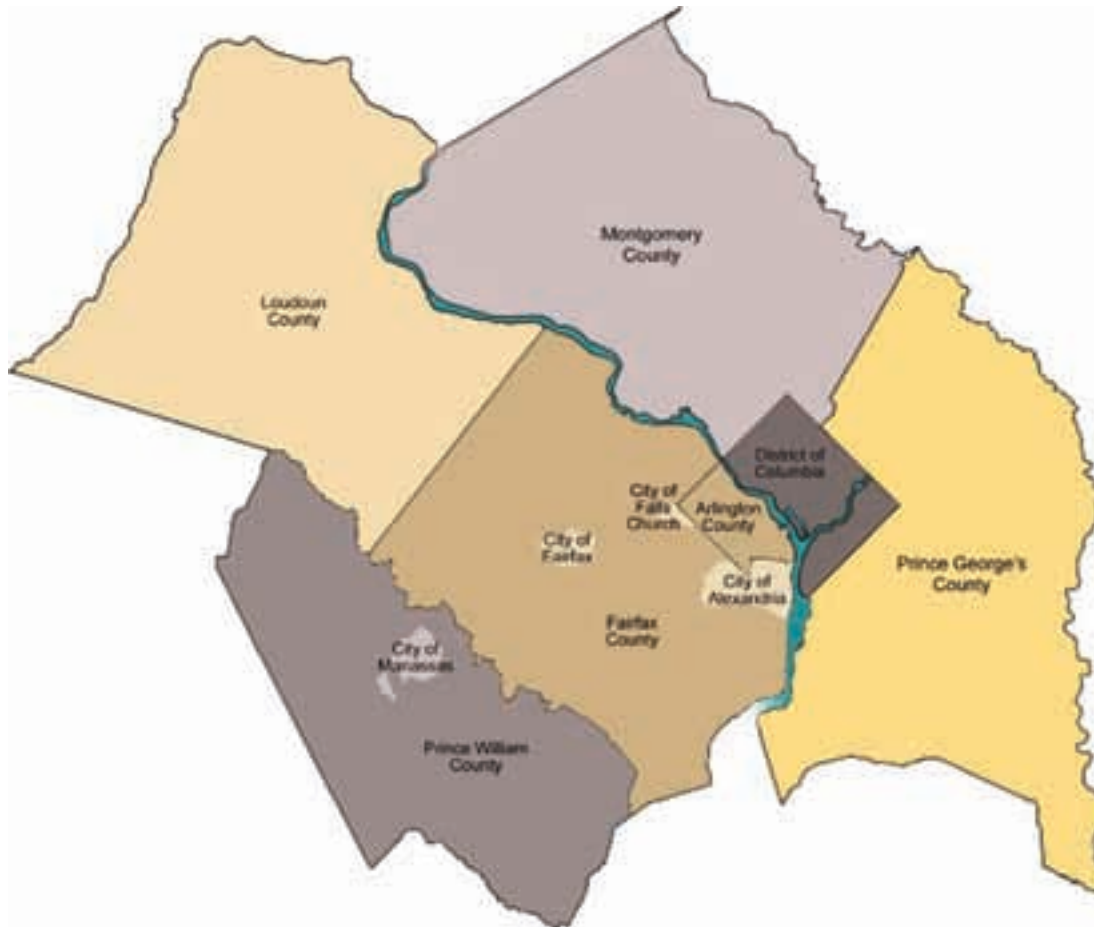
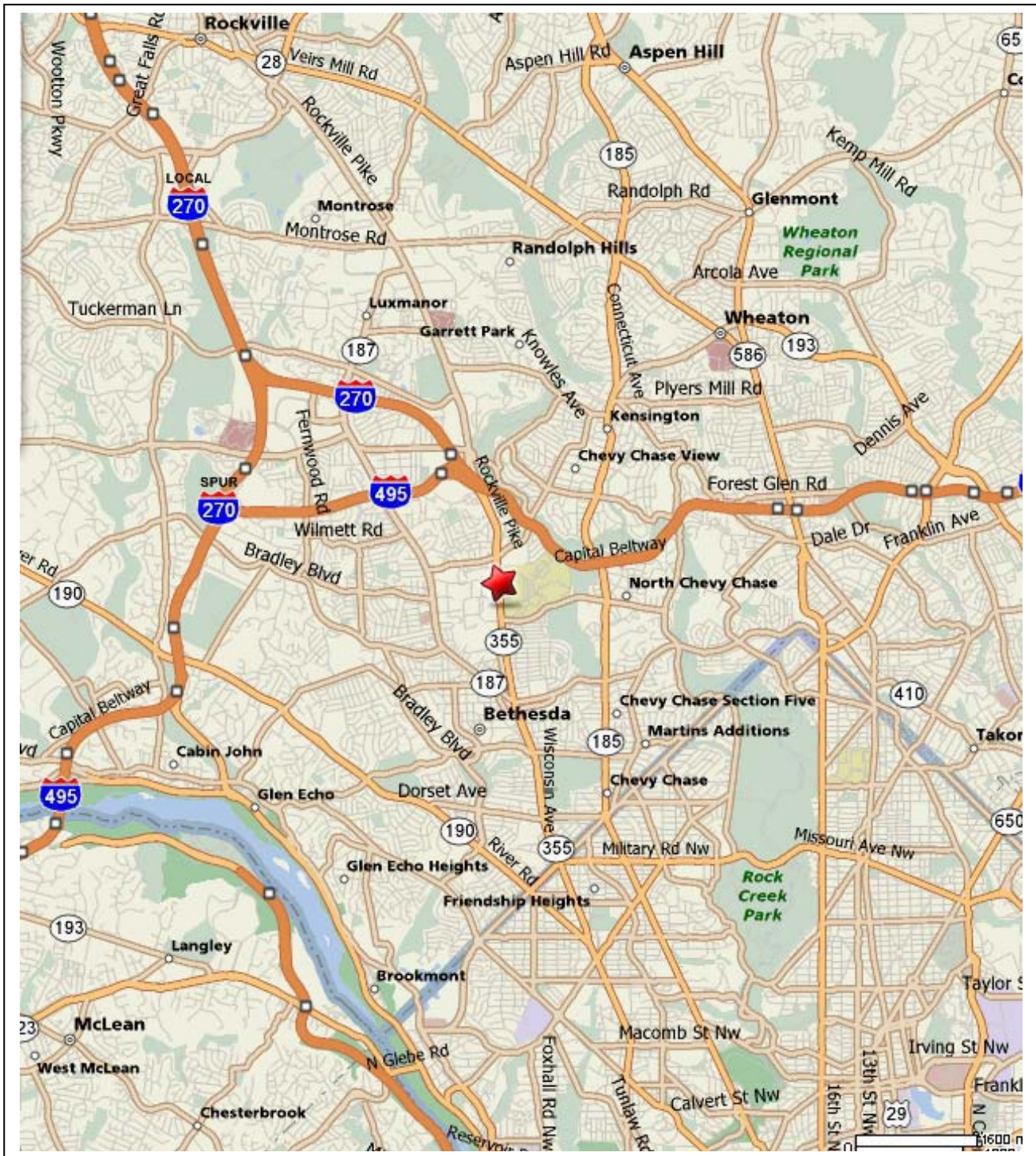


Figure 3-1
(source ncp.gov)

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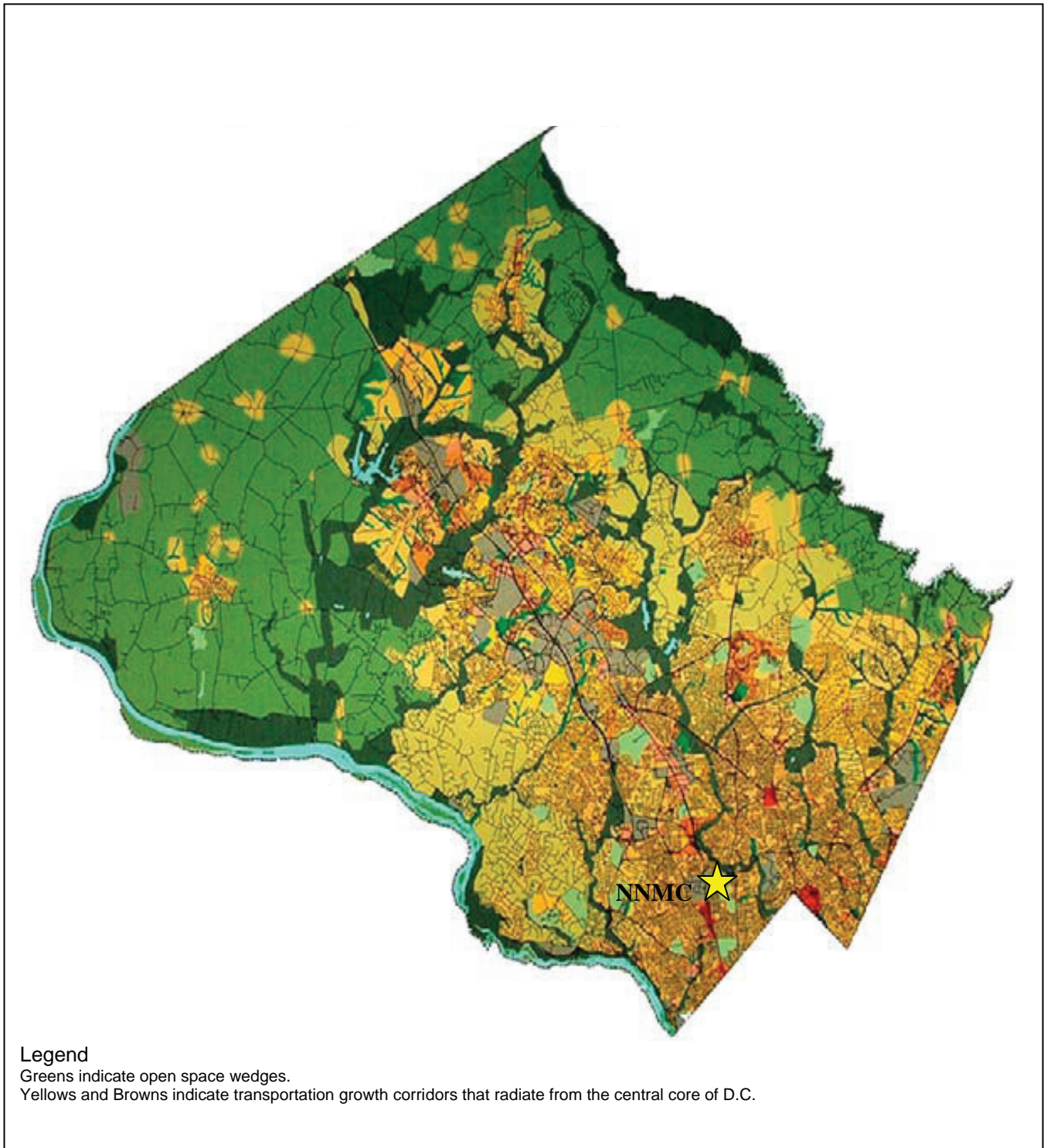
National Capital Region Map



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Figure 3-2.
(source mapquest.com)

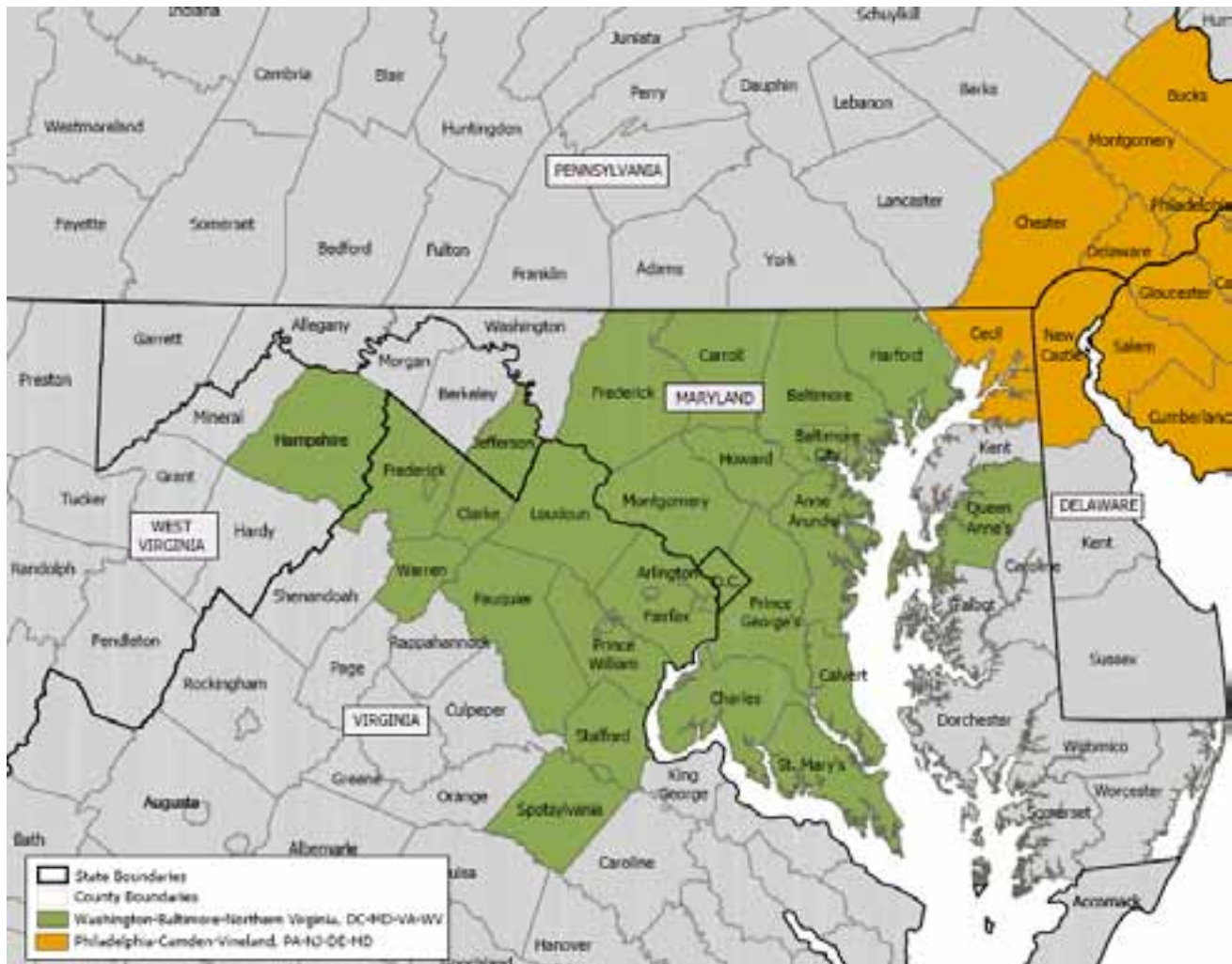
Vicinity Location Map



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Figure 3-3
Source: M-NCPPC

County General Plan
Wedges and Corridors



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Figure 3-4
US Census Bureau, 2000 Census
Maryland Dept of Planning

2000 Census
CMSA

Anne's County, Maryland, on the eastern shore of the Chesapeake Bay, the CMSA extends westward beyond the City of Hagerstown and Washington County in western Maryland to Berkeley and Jefferson Counties in West Virginia. The CMSA's population is expanding at a very rapid rate - with a 2000 Census population of 7,608,070 - with communities and employment spreading over an ever-widening geographic area. (Census).

3.2 Community Based Planning

Montgomery County has six Community Based Planning Areas and 37 specific planning areas. Within these areas, cities and municipalities have developed master plans that are integrated to provide a comprehensive approach that fits within the overall County goals. NNMC belongs to Community Based Planning Area 2, Bethesda - Chevy Chase - North Bethesda and the Planning Area 35 of Bethesda-Chevy Chase. Bounded by Rock Creek to the east, the City of Rockville on the north, Western Avenue and the Potomac on the south, and I-270 and I-495 to the west, this community planning area includes Bethesda Chevy-Chase, Friendship Heights Central Business District, Bethesda Central Business District, Westward, North Bethesda, Rock Creek Park, Grosvenor, White Flint and Twinbrook. (*M-NCPPC*)

The master plans for individual areas within this Community-Based Planning area all recognize the established nature of the residential land uses. They also recognize the focal points of the central business districts and the commercial centers for the surrounding residential neighborhoods. The National Institutes of Health (located directly across 355 or Rockville Pike from NNMC) and NNMC are both major employment locations for the area as well as the region. Ongoing work programs ensure the coordination of development within these employment areas to assure a cohesive fit into the patterns established by the sector and master plans of individual areas and the Community-Based Plans while maintaining and protecting the established neighborhoods.

There are three Federal facilities recognized in the Bethesda-Chevy Chase (B-CC) Master Plan including the National Naval Medical Center, the National Institutes of Health, and the National Geospatial-Intelligence Agency (NGA). The Bethesda-Chevy Chase Master Plan acknowledges the contribution of NNMC and NIH to the economy of the Planning Area and the County as a whole. It is well recognized that the presence of these federal facilities has a positive affect on the County's attraction to biomedical and high tech firms.

The 1990 Bethesda-Chevy Chase Master Plan notes that any actions at NNMC should be assessed for impacts to surrounding communities. It also recognizes the importance of considering provisions for pedestrian safety at the crosswalk from NNMC across Rockville Pike to the Medical Center Metrorail Station. This particular issue is a concern for NNMC as well and a metro connection on the NNMC side of Rockville Pike is currently being evaluated. The Area Plan recommends the landscape buffers between

NNMC and the adjacent residential communities and the open space character of the site along Stoney Creek be maintained. Seven goals and objectives were established in the B-CC Master Plan. (*B-CC*)

Perpetuate and enhance the high quality of life which exists in the Bethesda-Chevy Chase Planning Area. (Figure 3-5 Montgomery County Community Based Planning Areas and Figure 3-6 Bethesda-Chevy Chase Planning Area 35)

1. Achieve a level of future employment development that is in balance with a high quality of life and the transportation capacity of the Planning Area.
2. Provide for a balanced housing supply so that persons of varying income levels, age, backgrounds, and household characteristics may find suitable housing appropriate to their needs.
3. Protect the high quality residential communities throughout the Planning Area, as well as the services and environmental qualities that enhance the area.
4. Achieve a significant shift of new travel from auto use to transit and other mobility alternatives.
5. Protect natural resources and environmental qualities of the Planning Area.
6. Contribute to a strong sense of community and help reinforce community cohesion.

The 1990 B-CC Master Plan does not recommend any changes in the zoning surrounding NNMC. It identifies the desire to retain the residential character. (*M-NCPPC*) (See also, Figure 3-5 Montgomery County Community Based Planning Areas)

3.3 Bethesda

The name Bethesda is taken from an early church in the area built in 1820. In 1871 the post office used the same name and eventually the surrounding was known as Bethesda. The area defined as Bethesda includes approximately 13.2 square miles.

Originally, the town's location was situated on an ancient Native American trail. Between 1805 and 1820, it was a toll road to carry products between Georgetown and Frederick. Maryland Route 355, or Rockville Pike, is that corridor today that runs through Bethesda connecting North Bethesda and Rockville to the north and Frederick Maryland. Rockville Pike continues beyond Bethesda to the south through Chevy Chase, Friendship Heights, and into Washington DC.

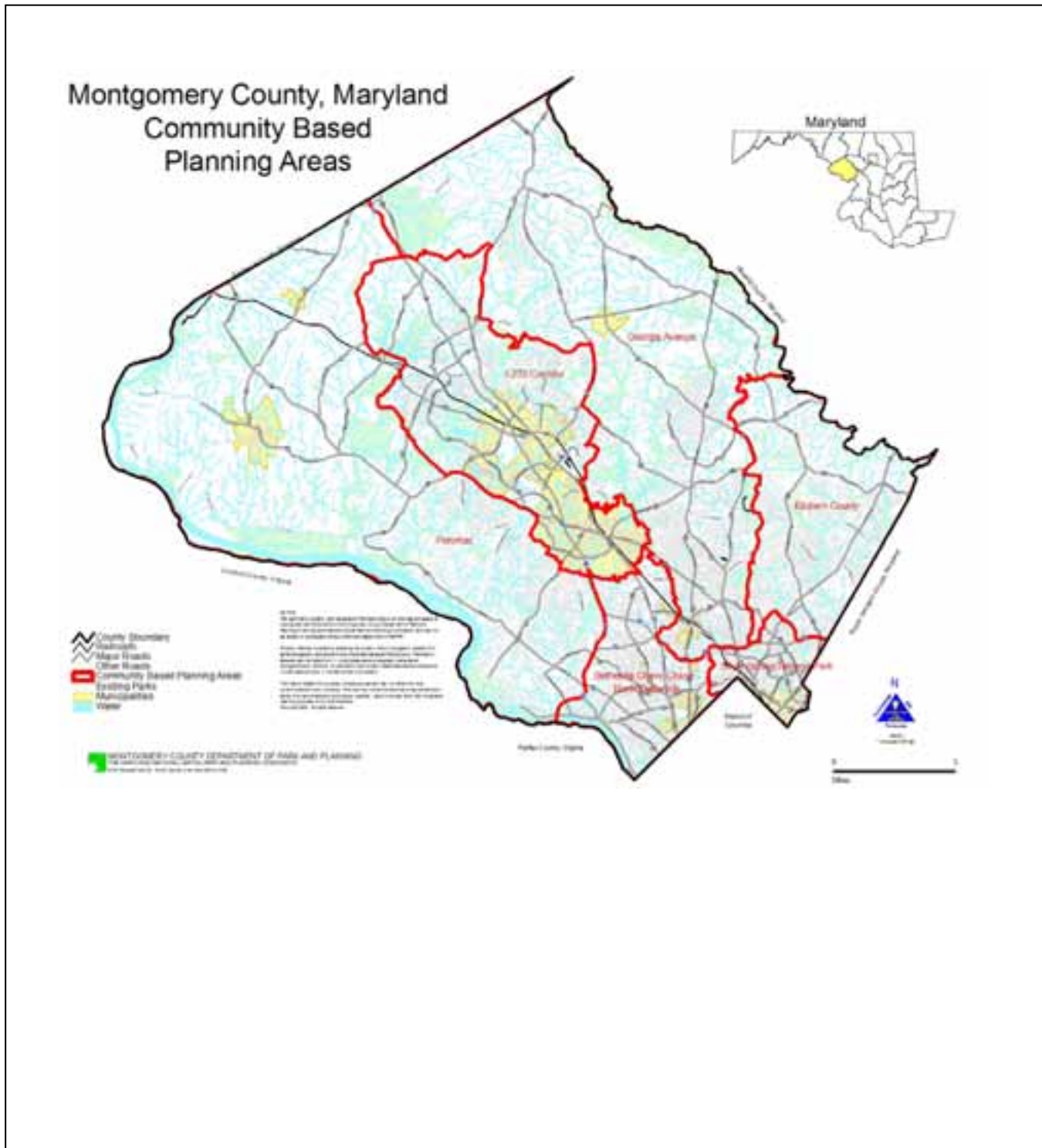
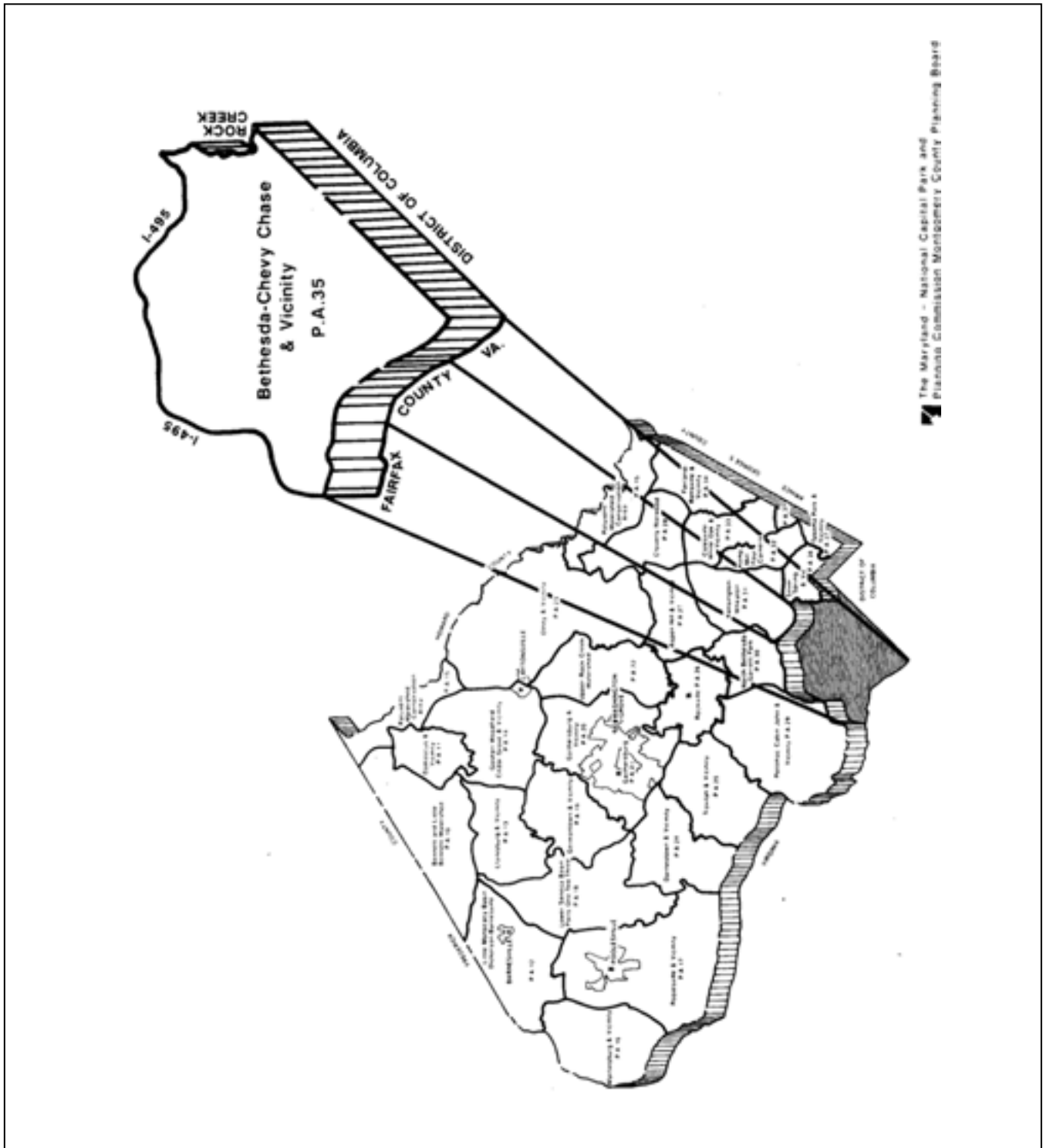


Figure 3-5
Source M-NCPPC

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Montgomery County
Community Based Planning



The Maryland - National Capital Park and
Planning Commission Montgomery County Planning Board

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Figure 3-6
Source: M-NCPPC

Bethesda-Chevy Chase
Planning Area 35

Downtown Bethesda is centered at the intersection of Route 355, Route 187, Georgetown Road, and Route 410. The Bethesda Central Business District (CBD) is the premier business district in the County, with modern office buildings and amenities. Bethesda's downtown workforce is in excess of 43,000 according to the Montgomery County Department of Parks and Planning.

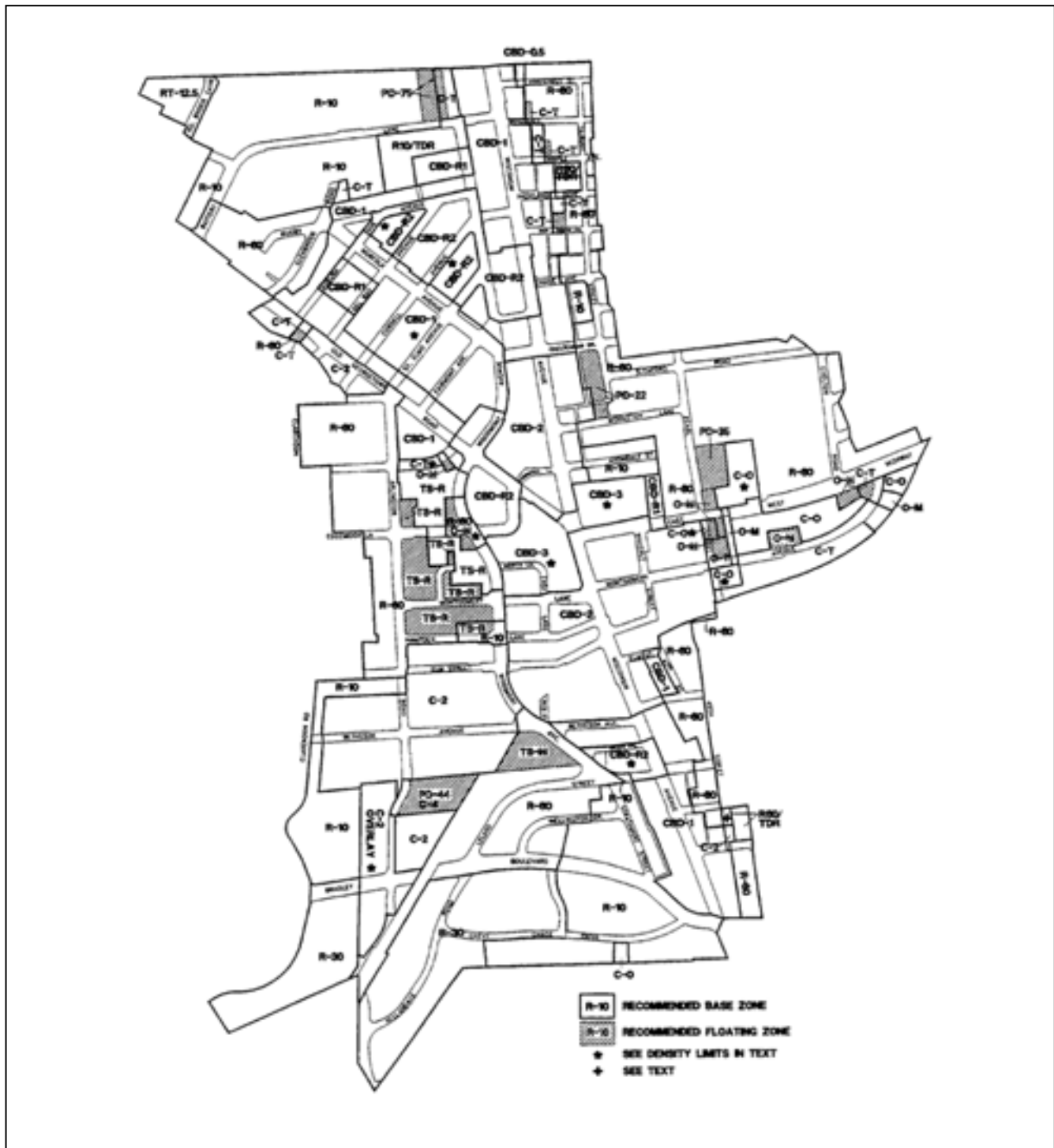
The Bethesda Central Business District Sector Plan (Figure 3-7 Bethesda CBD Zoning Plan) was developed in 1994 and was updated in 2006 with a Woodmont Triangle Amendment. One of the focuses of the amendment was to encourage increases in housing for multiple levels of income, small retail establishments, and public amenities. General goals included establishing the CBD as an arts and entertainment district and continuing to focus the growth and development on the present transit routes.

The Bethesda Metro station on the red line of the Washington Metro, handles more than 15,000 passengers on the average workday. Another Red Line station, Medical Center Metrorail Station, which is adjacent to Rockville Pike north of Bethesda, serves NNMC and the National Institutes of Health (NIH). The purple line, a 16 mile light rail or rapid bus transit line proposed from Bethesda to New Carrollton will provide direct connections to the Metro, local and inter-city buses, creating even wider access across the counties. (WMATA)

In addition to NNMC, Bethesda is the location of many important and prestigious organizations and institutions. The National Institutes of Health (NIH), Uniformed Services University of the Health Sciences (USUHS), Consumer Product Safety Commission, National Geospatial Intelligence Agency, Headquarters for Lockheed Martin, and Coventry Health Care are a few located in the area.

The United State Census of 2000, (Figure 3-4 2000 Census CSMA) indicates the total population of the area to be 55,277. In the last 40 years, over the last 4 Census, this figure is the lowest population recorded for Bethesda, but the numbers have been fairly constant with 56,527 in 1960, a high of 71,621 in 1970, 62,736 in 1980, and 62,936 in 1990. According to the 2000 Census, there are 23,659 households and 14,455 families. The population density is 4,205/square mile and housing unit density is 1,854/square mile. The racial mix of the 2000 Census population is 85.8% white, 2.7% black or African American, 0.2% Native American, 7.9% Asian, and approximately 1.3% other. Of the 23,659 households, 28% had children under age 18, 53.4% were married couples, 6% were female householders, and 39% were non-families. Breaking down the 55,277 population, 21.9% are under 18, 4.6% are 18 to 24, 24.29% are 25-44, 1% are 45-64 and 12% are 65 or older. (Census)

Bethesda's population is extremely well educated and wealthy when compared with the rest of the country. According to the 2000 Census, 79% of the residents 25 years and older have undergraduate, bachelors' degrees and 49% have graduate or professional degrees. The median household



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Figure 3-7
Source Bethesda-Chevy Chase 1990 Master Plan

Bethesda CBD
Zoning Plan

income is \$99,210 and the medium income for a family was \$130,206. The per capita income for the area was \$58,479.

Similar demographics exist in the neighboring communities of Potomac, MD, Chevy Chase Village, MD, Great Falls, VA, and McLean, VA. (see also, Figure 3-8 Vicinity Land Use)

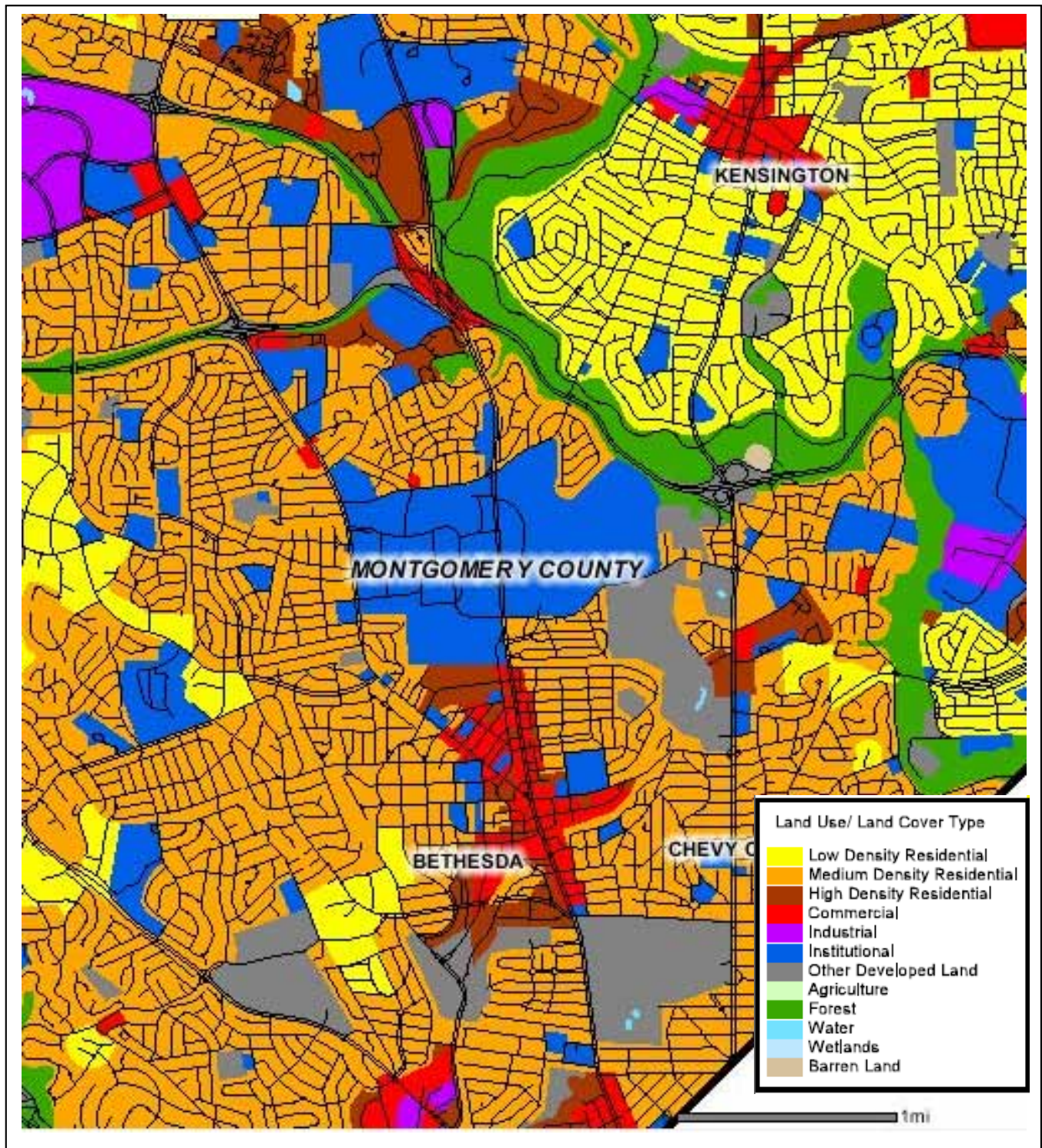
3.4 Review Agencies

The following information provides an overview of the federal, regional and local agencies responsible for planning for the area surrounding NNMC. NNMC has always had strong on-going relationships with these agencies and the community. Because of the significant growth BRAC 2005 on the community, this relationship and the coordination process is even more important. Shortly after BRAC 2005 was announced, the military began efforts to evaluate and plan for the impact on NNMC and the community. The internal military offices created for this purpose are discussed later in Chapter 5 under the process. This chapter discusses the community and federal agencies, all of which hold interest and play a role in the development of NNMC, and all of which have had the opportunity to participate in the planning process as required by the National Environmental Policy Act.

The National Capital Planning Commission (NCPC) is the federal government's planning agency for the District of Columbia and surrounding counties. The Commission provides overall planning guidance for federal projects within the regions. It oversees long range planning. NNMC has consulted with NCPC on the BRAC initiatives. NCPC reviews both the EIS and the Master Plan efforts and will assist in resolution of any planning issues between local and Federal agencies. They will also continue to be involved in the development of individual projects as they are implemented on the Bethesda campus.

The Maryland National Capital Park and Planning Commission (M-NCPPC) is a bi-county agency of Montgomery and Prince George's Counties. Each county has an appointed planning board which is the official planning agency for the respective county. Members of each County serve on the Commission and act jointly on matters that affect both counties. The Montgomery County Department of Planning forecasts population, jobs and housing for the County. In between each National Census, the Department of Planning conducts a survey of households to update forecasts and identify changes anticipated in the County. The Montgomery County Planning Board has no authority over federal installations within its jurisdiction; however, they participate and provide input as requested.

The Metropolitan Washington Council of Governments (COG) is composed of 21 local governments as well as area members of the MD and VA legislatures, Senate, a House of Representatives. It is an independent regional organization that is actively involved in broad reaching area issues affecting over 4,000,000 people and over 3,000 square miles. It provides a focus for developing responses to such regional issues as the environment,



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Figure 3-8
(source Montgomery Dept of Planning)

Vicinity
Land Use

affordable housing, economic development, human services, population growth, safety, and transportation. COG is an information resource for planning actions coordinating planning policies for land use, transportation, and the environment.

Associated with COG, the National Capital Regional Transportation Planning Board (TPB) was established in 1965 in response to legislation that required a “continuing, comprehensive and coordinated” transportation process in every urban area in the United States with a population over 50,000. Today it is the regional forum and advocacy for transportation planning. Members include representatives of local governments, state agencies, MD and VA General Assemblies, and Washington Metropolitan Area Transit Authority (WMATA). TPB has a formalized public involvement process that allows for comment prior to taking action. TPB’s planning area covers the District of Columbia and surrounding jurisdictions, including Montgomery County. NNMC has participated in the Transportation Advisory Committee to ensure issues surrounding the increases at NNMC are addressed in a collaborative way.

3.5 Transportation

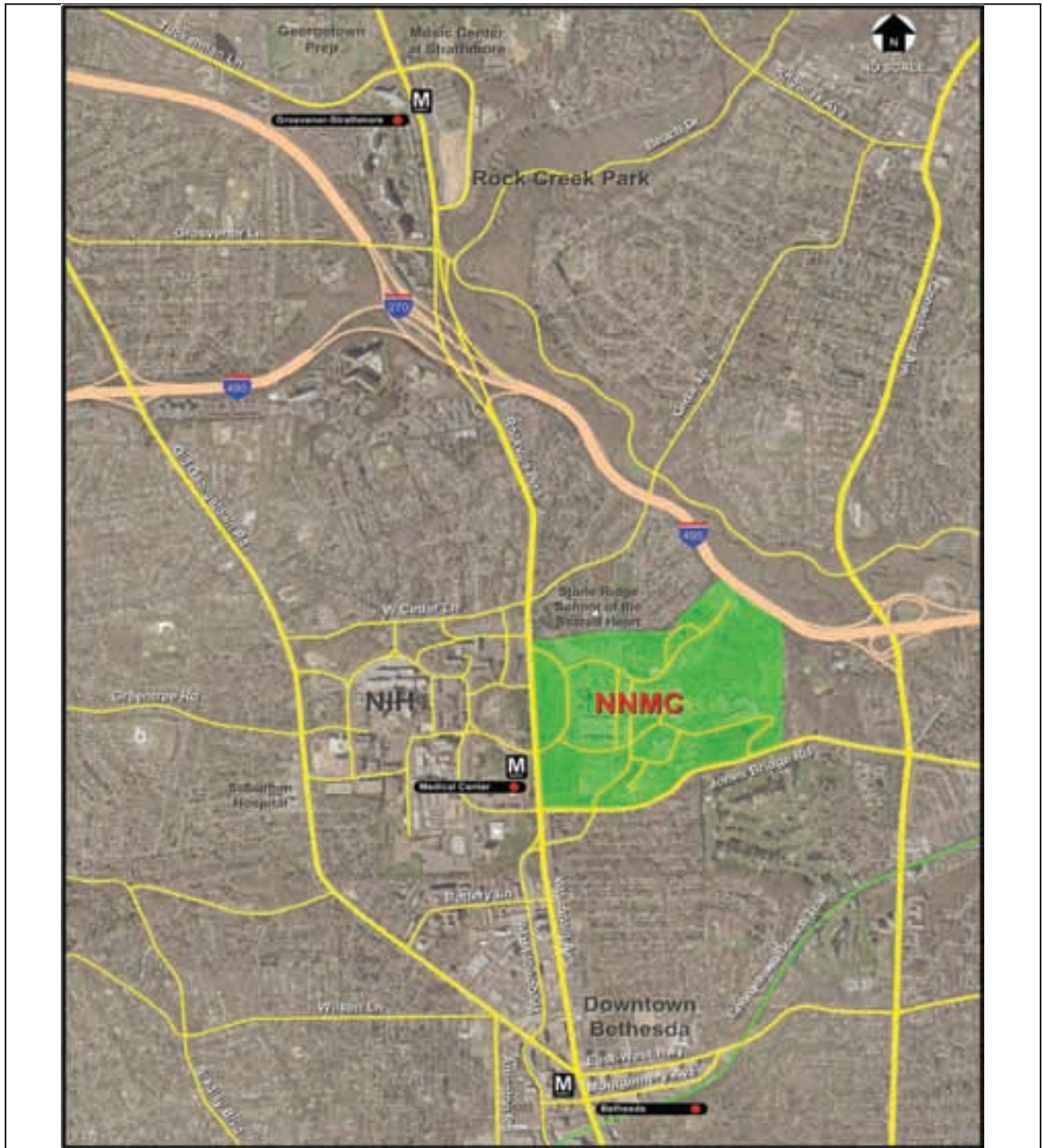
The NNMC is situated just south of the Capital Beltway (I-495), in Bethesda, Montgomery County, Maryland. The western and southern boundaries of the center are formed by Rockville Pike (MD 355) and Jones Bridge Road, respectively. (Figure 3-9 Regional Site Location Map)

3.5.1 Roadway Network

The roadway network providing immediate regional and local access to the campus is illustrated in (Figure 3-10 NNMC Study Area Map). Figure 3-11 illustrates the roadways providing local access to and on the NNMC campus.

Rockville Pike (MD 355) is classified as a Major Highway by the County. It runs north-south along the western edge of the campus, connecting the site with Washington, DC to the south and the City of Frederick, Maryland to the north. This roadway also provides connections to other regional areas via an interchange with the I-270 / I-495 Freeway System situated just to the north, and intersections with major east-west arterials along other segments to the north and south of the campus. MD 355 is therefore a major regional and commuter route. It is also a main artery for several bus routes operated by the Washington Metropolitan Area Transit Authority (WMATA) and the Montgomery County Ride-On transit systems.

Jones Bridge Road is classified, by the County, as an Arterial Road between Rockville Pike and Jones Mill Road. It runs east-west along the southern edge of the NNMC campus, and intersects with Connecticut Avenue (MD 185) to the east.

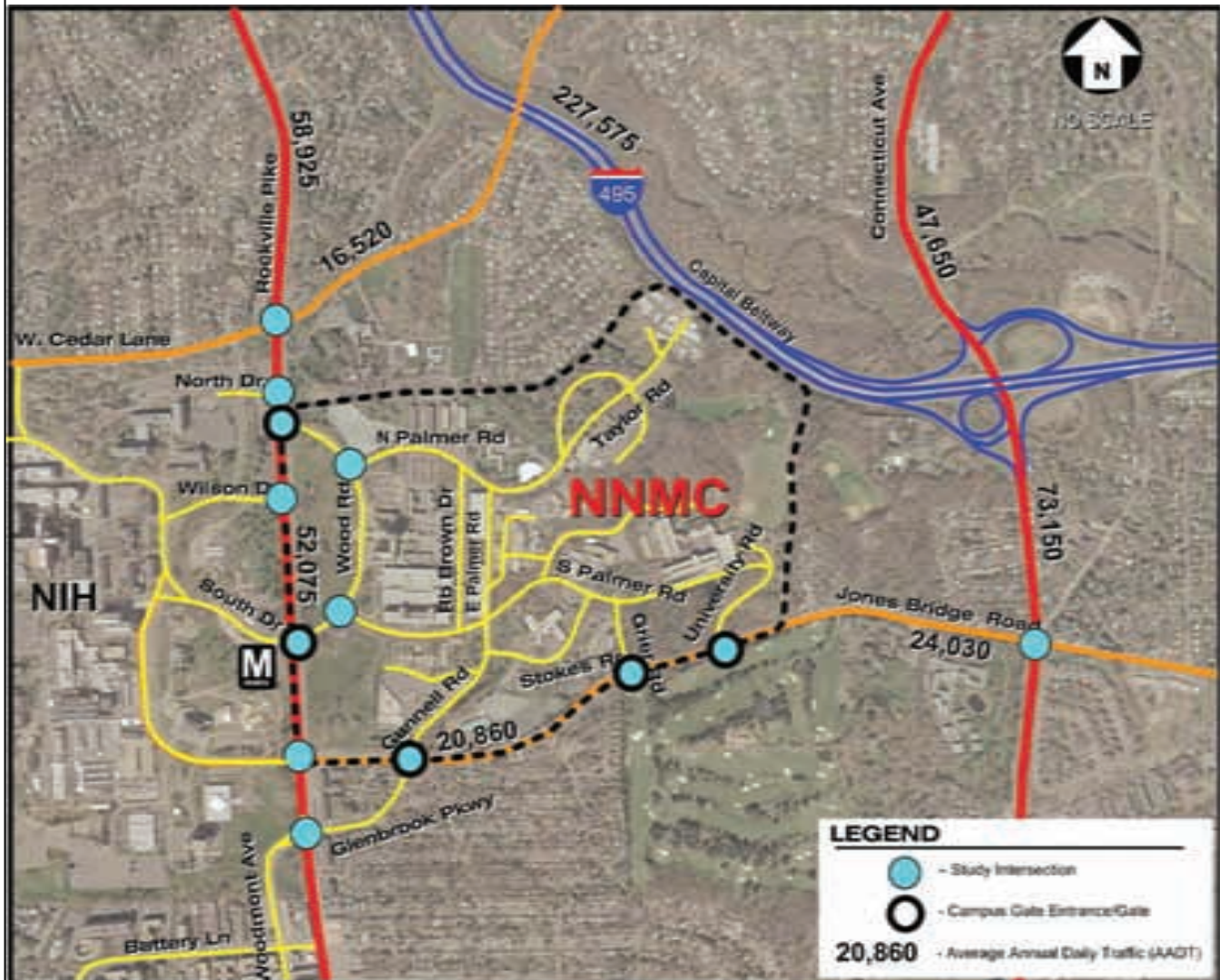


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Figure 3-9

Regional Site
Location Map

Figure 3-10 NNMC Study Area Map



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Figure 3-10

NNMC Study
Area Map

3.5.2 Public Transportation

The NNMC is well served by public transportation facilities as shown in Figure 3-11 Existing Transit Facilities. The campus is located at the Medical Center Metrorail Station on the Red Line of the Washington Metropolitan Area Transit Authority (WMATA). The station is also a major stop / transfer point for several WMATA and Montgomery Ride-On bus routes.

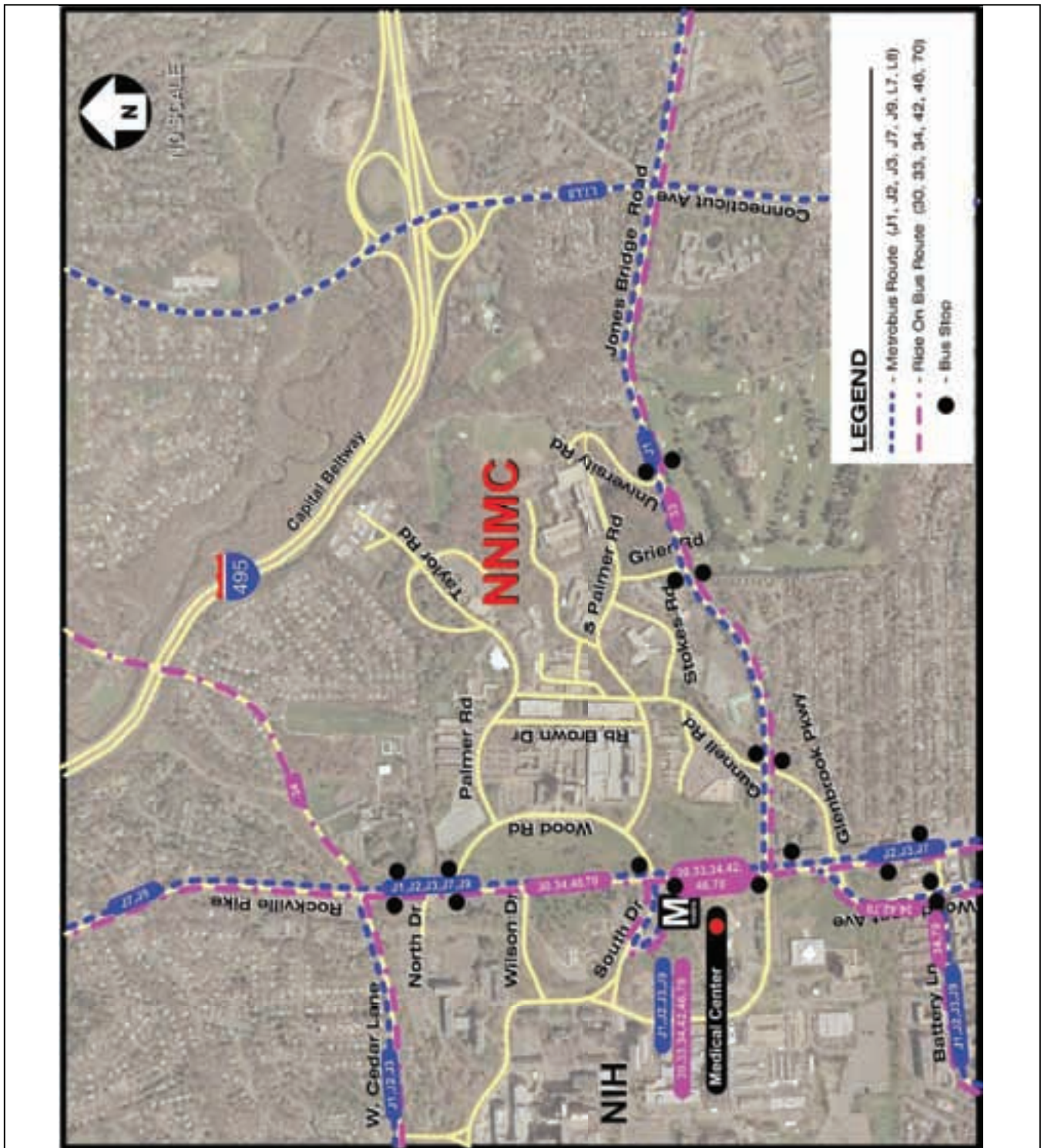
The Metrobus routes serving the campus are as follows:

- Route J1 provides rush hour only service between the Silver Spring and Medical Center Metrorail Stations via Jones Bridge Road.
- Routes J2 and J3 offer westbound and eastbound through service between the Silver Spring Metrorail Station and Montgomery Mall with intermediate stops in the Bethesda CBD and at the Medical Center Metrorail Station.
- Routes J7 and J9 comprise the “I-270 Express”. They run between the Lake Forest Transit Center Station and the Bethesda Metro Station.

There are six (6) Ride-On Routes serving the Medical Center Metrorail Station. These are as follows:

- Route 30 is a local collector route that circles through the neighborhoods before terminating at the Bethesda Metro Station.
- Route 33 and 34 provide rush hour only service to Wheaton Plaza from several areas through the Medical Center Metrorail Station.
- Route 42 provides service to Friendship Heights via Woodmont and Rockville Pike through the Medical Center Metrorail Station.
- Route 46 connects NNMC with Rockville via Rockville Pike, and primarily serves as a feeder to the Metrorail Stations along this route.
- Route 70 is an express service running between the Germantown Milestone park-and-ride lot and Bethesda through the Medical Center Metrorail Station.

Heavy rail commuter service is available via the Maryland Rail Commuter (MARC) “Brunswick” line. Trains originate from Martinsburg in West Virginia, or Brunswick and Frederick in Maryland, and travel to Union Station in Washington, D.C. in the AM hours with reverse movements occurring in the evening. MARC currently operates nine (9) trains inbound to Washington in the morning and ten (10) trains outbound in the evening. All trains stop in Rockville about six miles to the north of the NNMC Bethesda campus, where a connection can be made to the Metro Red Line.



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Figure 3-11

**Existing
Transit Facilities**

3.6 Utilities

3.6.1 Electrical

The local power utility is Potomac Electric Power Company – PEPCO. PEPCO feeds the campus from two substations. The Medical Center's primary power is supplied from four PEPCO 13.8 KV feeders from the Woodmont substation 80. These feeders are underground and enter the campus where South Wood Road ends into Rockville Pike. These feeders terminate in a large underground switchgear vault #243 located between Buildings 1 and 9. This primary switchgear in vault #243 feeds about 85% of the campus. There are two 13.8 KV primary feeders from PEPCO's NIH substation 167. These feeders enter the campus where Grier Road ends into Jones Bridge Road. These feeders supply power to the Uniformed Services University of Health Sciences (USUHS) Complex on campus. There is a 2-way normally open primary feeder connection between the medical center and USUHS to be used by PEPCO for emergency primary power backup.

3.6.2 Water

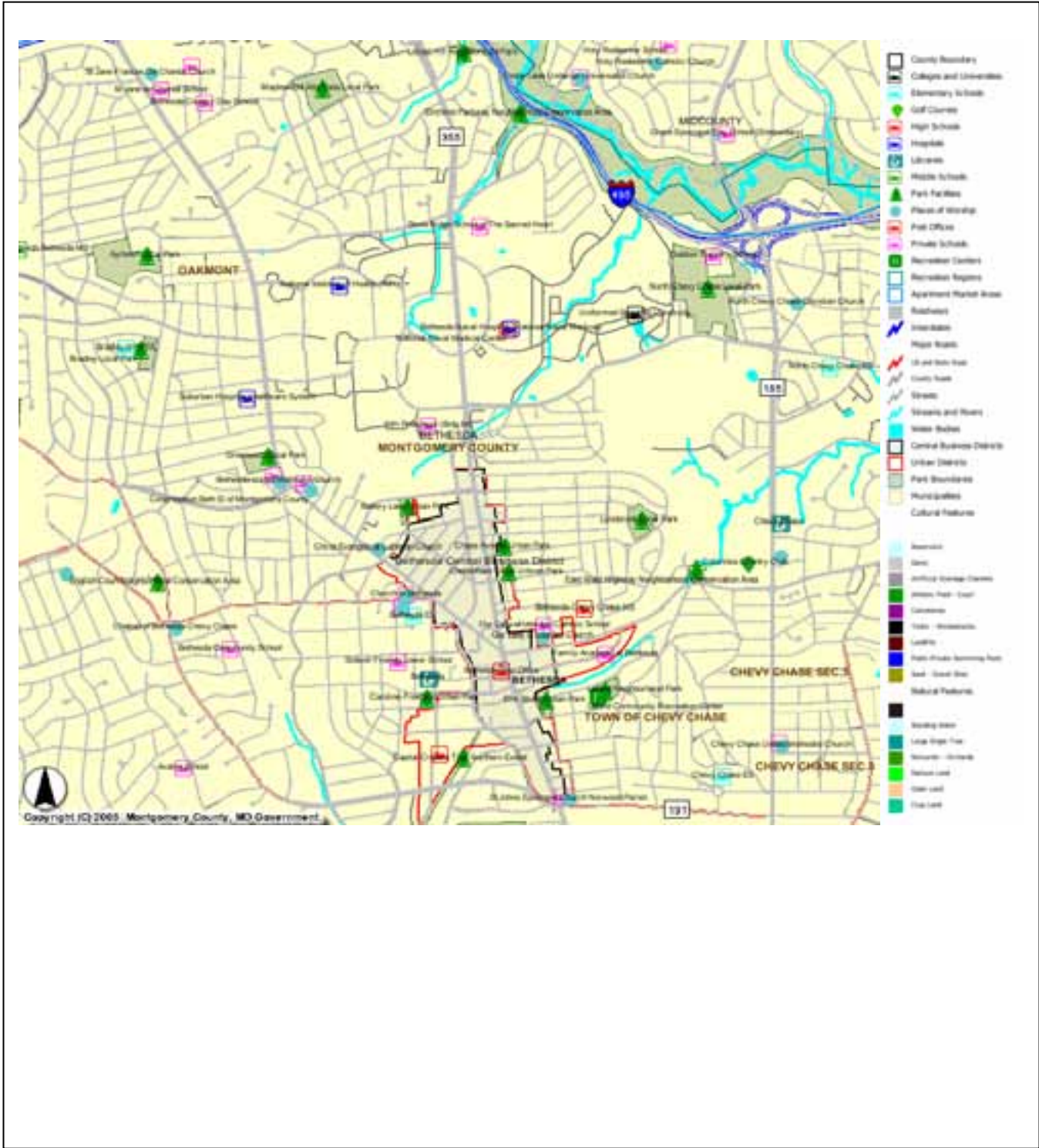
Washington Suburban Sanitary Commission (WSSC) supplies water to NNMC. Water is delivered to the campus by way of four (4) interconnections with WSSC's system. There is a 10" line connection on Rockville Pike, a 12" line connection on Jones Bridge Road, and internal connections on the campus. Distribution of the water on the campus is accomplished through a network of water mains varying in size from 6 to 12 inches. There are no pumping stations or water storage tanks located on campus. The water supply pressure varies on average between approximately 65 and 80 psi. Water quality is considered good.

3.6.3 Sanitary Sewer

Sanitary sewage is collected by the campus's gravity sewer system and delivered to the WSSC's mains at 22 known locations throughout the campus. Two WSSC mains run through the approximate center of the campus. These mains flow from southwest to northeast along Stoney Creek. During a site investigation conducted on December 6 and 7, 2006 visual estimates of system capacity were made at key points along the WSSC's mains and at critical points on the campus system. The time chosen for these observations roughly corresponded with the expected peak daily flow for the campus. A spread sheet model was developed from these estimates. The results of this modeling indicate that the current capacity of the WSSC system is adequate for present conditions and proposed master plan expansions.

3.7 Cultural Assets

Refer to Figure 3-12 Cultural Resources Vicinity Map for further information concerning Section 3.7.



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Figure 3-12
(used with permission)

Cultural Resources
Vicinity Map

3.7.1 Schools

Montgomery County has the largest public school system in Maryland. Countywide, the Montgomery County Public School (MCPS) system has 130 elementary schools, 38 middle schools, 25 high schools, and 7 special schools. The area of NNMC is in the 3rd District of the MCPS which is made up of 3 school clusters: Bethesda Chevy Chase, Walt Whitman and Walter Johnson. Within these three clusters there are eighteen elementary schools, four middle schools and three high schools. (MCPS)

In addition to the public school districts, there are several private schools in the area. There are 4 private high schools and 10 private middle or elementary schools in the area. The Stone Ridge School of the Sacred Heart is a preparatory girls' school directly north of the NNMC campus that shares the northern border of the campus.

There are several colleges and institutions of higher learning in the area. Located directly on the NNMC campus is the Uniformed Services University of Health Sciences, the uniformed services medical and nursing school. The American College of Cardiology and the Foundation for Advanced Education in the Sciences are both located on Old Georgetown Road north of NNMC. The Howard Hughes Medical Institute (HHMI) is on Jones Bridge Road in Chevy Chase. Part of HHMI, the Mary Woodard Lasker Center is located on NIH where medical students are able to work in an area of research. Also within the region are Johns Hopkins University and the University of Maryland in Baltimore, Marymount University in Arlington, VA and Montgomery College in Rockville, MD. There are twelve colleges and Universities in Washington DC, to include Howard University, American University, Catholic University of America, Georgetown University and George Washington University.

3.7.2 Public Safety

NNMC maintains its own fire department and military police, comprised of both military personnel and contracted services. In addition to NNMC safety personnel on the installation, NNMC has working relationships and agreements for assistance with the National Institute of Health, the Montgomery County Fire and Rescue Department, and the Montgomery County Police Department, as well as other state and local agencies, including the U.S. Federal Protective Services and the FBI.

3.7.3 Medical Facilities

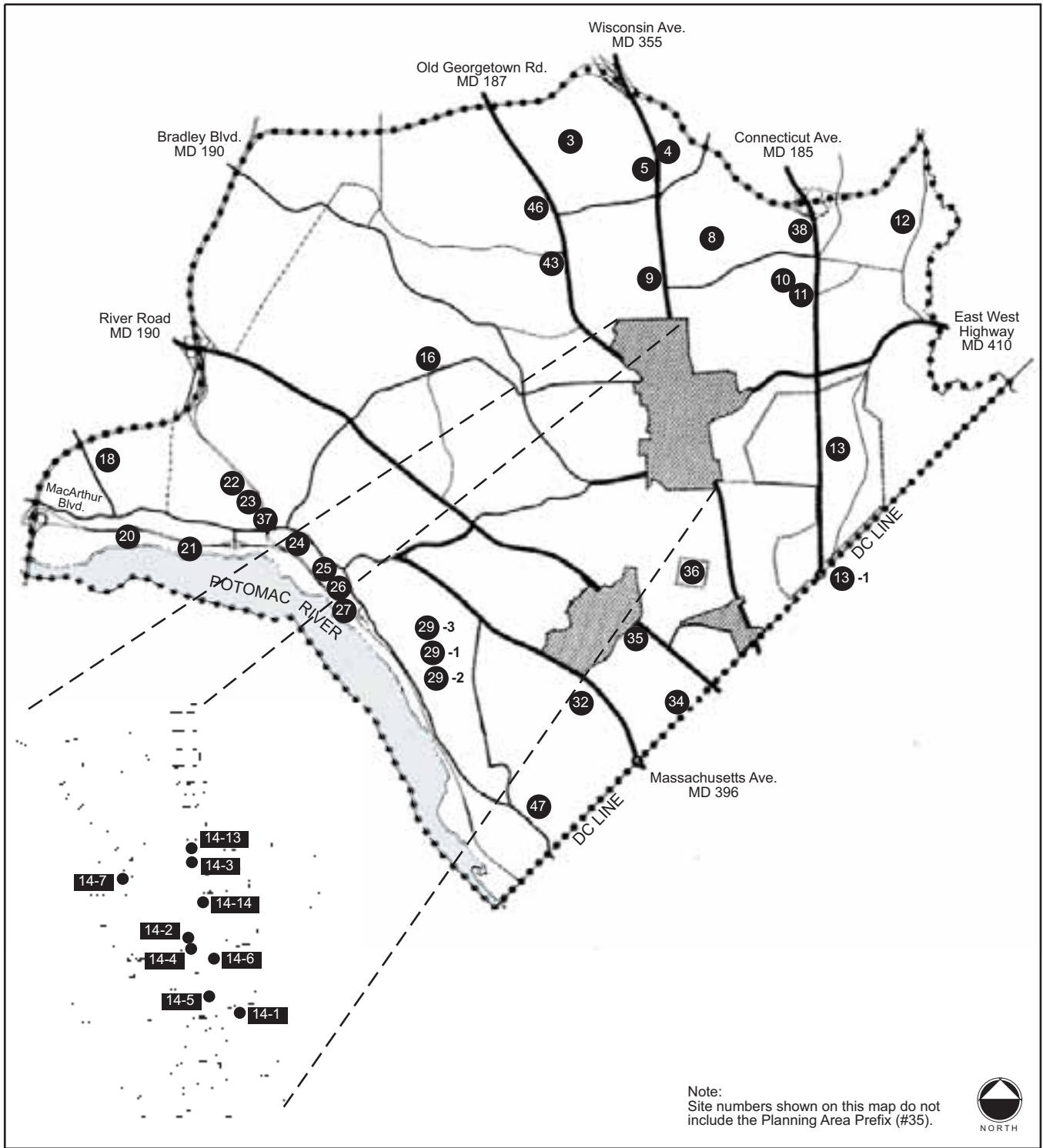
In addition to NNMC, there are several medical resources within the vicinity. The National Institutes of Health (NIH) Clinic Center and Suburban Hospital on Old Georgetown Road are both in the immediate area of NNMC in Bethesda. Shady Grove Adventist Hospital in Rockville and Holy Cross Hospital in Silver Spring are also in the vicinity.

The Bethesda Hospital's Emergency Preparedness Partnership (BHEPP) was established in 2004 and is a collaboration of NIH, Suburban Hospital and NNMC whose mission is to respond to local regional and national emergencies in the NCA. Due to the proximity of these three healthcare organizations, and through this partnership there is a desire to create an underground network or an overpass to assist with potential emergency movement across Rockville Pike between the three sites.

3.8 Historic Resources

Like NNMC, the community in which NNMC is located is full of history. There are a number of historic resources within the Bethesda-Chevy Chase Planning Area. (Figure 3-13 Historical Resources Vicinity Map) Montgomery County's Master Plan for Historic Preservation (1979) contained in Chapter 24A of the Montgomery County Code (1979, rev'd. 1989) and the Historic Preservation Ordinance of Montgomery County are designed to protect and preserve the county's historic and architectural heritage. Building 1, Bethesda Tower is the only site on NNMC campus listed on the County's Master Plan for Historic Preservation. The following historic sites listed on the Master Plan for Historic Preservation are located within the boundaries of the Bethesda/Chevy Chase planning area. The ones marked with an * are also listed in the National Register of Historic Places: (MC-MNPPC)

(35/3) Alta Vista	5506 Beech Ave, Bethesda
(35/4) Samuel Perry House	9421 Wisconsin Ave, Bethesda
(35/5)* Bethesda Meeting House	9400 Wisconsin Ave, Bethesda
(35/8)* Bethesda Naval Hospital Tower Block	8901 Wisconsin Ave, Bethesda
(35/9) George Freeland Peter Estate (NIH)	Rockville Pike, Bethesda
(35/10) Hayes Manor	4101 Manor Road, Chevy Chase
(35/11) Chevy Chase Lake/Trolley Station (moved)	originally 8401 Connecticut Ave
(35/12)*Woodend	8940 Jones Mill Road, Chevy Chase
(35/13)*Chevy Chase Historic District and numerous individual sites located in Chevy Chase Section 3, Section 5, and in the vicinity of Martin's Additions.	
(35/13) 1 - Corby Mansion	9 Chevy Chase Cir
(35/14) 1 - Farm Women's Market	7155 Wisconsin, CBD
(35/14) 2 - Madonna of the Trails Statue	7400 Wisconsin, CBD
(35/14) 3 - Little Tavern	8100 Wisconsin, CBD
(35/14) 4 - Bethesda Theater Complex	7715-7723 Wisconsin, CBD
(35/14) 5 - Bethesda Post Office	7400 Wisconsin, CBD
(35/14) 6 - Brooks Photographers	7349 Wisconsin, CBD
(35/14) 7 - Community Paint & Hardware	7250 Wisconsin, CBD
(35/14) 13 Leslie Beall House (Mrs. Wither's House)	7740 Old Georgetown Road, CBD
(35/14) 14 Bethesda-Chevy Chase High School	4301 East-West Highway, CBD
(35/16) C. W. Landsdale House/Landon School	6101 Wilson Lane, Bethesda
(35/18) W. Lynch House	8313 Tomlinson Ave, Cabin John
(35/20)*Lock #10 & Lockhouse	C&O Canal, Cabin John
(35/21)*Lock #8 & Lockhouse	C&O Canal, Cabin John
(35/22) Oakmont/Rammed Earth House	6532 75 th St, Cabin John
(35/23) Cabin John Hotel Gas House	MacArthur Blvd, Cabin John
(35/24) Reading House	44 Wellesly Cir, Glen Echo
(35/25)*Clara Barton House	5801 Oxford Road, Glen Echo
(35/26)*Glen Echo Chautauqua [Historic District]	MacArthur Bldg, Glen Echo
(35/27)*Lock #7 & Lockhouse	C&O Canal, Glen Echo
(35/29) 1 - Baltzley Castle	5415 Mohican Road, Glen Echo
(35/29) 2 - R. A. Charles Castle	5417 Mohican Road, Glen Echo
(35/29) 3 - Kimmel House	5446 Mohican Road, Glen Echo
(35/32) Battery Bailey/Civil War Earthworks	Westmoreland Hills, Little Falls
(35/34) DC/MD Boundary Stones	Various locations
(35/35)*Milton/Loughborough House	5312 Allendale Road, Bethesda
(35/36)*Somerset Historic District	Somerset
(35/37)*Cabin John Aqueduct	MacArthur Blvd, Cabin John
(35/38) "In the Woods"	8922 Spring Valley Road
(35/43) Bethesda Community Store	8804 Old Georgetown Rd, Bethesda
(35/46) Walter Johnson House	Oakmont and Old Georgetown
(35/47) Bonfield's Garage	624 MacArthur Blvd, Bethesda
(35/54) Hawkins Lane Historic District	Connecticut Ave



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3
14-1 HISTORIC PRESERVATION SITES

Figure 3-13

Historic Resources
Vicintiy Map

3.9 Population Trends

The 2000 Census, the last decennial census, indicates the population of Montgomery County is 873,341. (*Census*) The American Community Survey (ACS) is a nation-wide survey conducted as part of the 2010 Decennial Census Program. It collects population, social, economic and housing data and is being implemented in several phases. The ACS program was fully implemented in 2005 in every county with an annual sample of approximately three million housing units.

The 2006 American Community Survey (ACS) indicates Montgomery County population to be 932,131, with estimates of reaching the 1 million population mark in 2010. Population trends in Montgomery County peaked in the 1980's and then surged again in the late 1990's. During 2000 and 2005, the County saw an increase in its population of 8%, however this dramatic growth is not expected to continue. Montgomery County has now begun a slower growth phase as the supply of undeveloped land is reduced. Though the rate of growth is anticipated to decline, the County plans include capacity for increased growth through 2030. The latest forecast by the Washington Council of Governments (COG) predicts an additional 207,000 people, 94,300 households, and 170,000 new jobs in Montgomery County between 2005 and 2030. (Figure 3-14 Historic and Projected Population Chart)

3.10 Economy and Housing

Because of its close proximity to the District of Columbia, a thriving economy and good schools, Montgomery County is a popular place to live. Montgomery County is an important business and research center. The biotechnology industry in Montgomery County is diversified and there is a strong network of interrelationships among the biotechnology firms, government agencies, and institutions of higher education. As the biotech industry continues to grow nationally in the future, Montgomery County will certainly be a part of that growth. In addition to the large biotechnology industry, there are many large firms based in the county that adds to the diversified workforce. These include Lockheed Martin, Discovery Communications, Marriott International, IBM, BAE Systems, Inc and GEICO to name a few. The government agencies based in Montgomery County also contribute significantly to its healthy economy. Bethesda and Silver Spring are the largest business hubs in the county. (*MDBED*)

The median household income for Montgomery County based on the 2000 Census was \$71,551 and the mean was \$95,078. In 2005 American Community Survey the median household income was \$82,187. These are considerably above the state median of \$52,868 and national median of \$41,944. Montgomery County's poverty level is very low at only 6.5% for individuals compared to the state level at 8.5% and the national figure of 12.4%.

Historical and Projected Total Population
(Revisions, September, 2006)

	Census 1970	Census 1980	Census 1990	Census 2000	2005	2010	2015	2020	2025	2030
UNITED STATES	203,302,031	222,542,199	248,709,873	282,125,000		308,936,000		335,805,000		363,584,000
MARYLAND	3,923,897	4,216,933	4,780,753	5,296,486	5,602,250	5,904,425	6,138,025	6,337,075	6,534,650	6,729,500
WASHINGTON SUBURBAN REGION	1,269,455	1,358,916	1,635,788	1,870,133	1,996,950	2,100,850	2,188,000	2,270,900	2,364,200	2,469,900
Frederick County	84,927	114,792	150,208	195,277	219,900	243,200	265,600	287,900	310,400	339,700
Montgomery County	522,809	579,053	757,027	873,341	932,050	990,000	1,035,000	1,075,000	1,112,000	1,145,000
Prince George's County	661,719	665,071	728,553	801,515	845,000	867,650	887,400	908,000	941,800	985,200

Projections for the Baltimore Region based on Round 6C from the Baltimore Metropolitan Council of Government's Cooperative Forecasting Committee.
Projections for the Washington Suburban and Southern Maryland Regions based on Round 7.0 of the Metropolitan Washington Council of Government's Cooperative Forecasting Committee.

Prepared by the Maryland Department of Planning, Planning Data Services, September 2006.
National statistics from National Census populations and projections

Historical and Projected Total Population
Average Annual Growth Rates

	1970- 1980	1980- 1990	1990- 2000	2000- 2005	2005- 2010	2010- 2015	2015- 2020	2020- 2025	2025- 2030
UNITED STATES	0.91%	1.12%	1.27%		0.91%		0.84%		0.80%
MARYLAND	0.72%	1.26%	1.03%	1.13%	1.06%	0.78%	0.64%	0.62%	0.59%
WASHINGTON SUBURBAN REGION	0.68%	1.87%	1.35%	1.32%	1.02%	0.82%	0.75%	0.81%	0.88%
Frederick County	3.06%	2.73%	2.66%	2.40%	2.03%	1.78%	1.63%	1.52%	1.82%
Montgomery County	1.03%	2.72%	1.44%	1.31%	1.21%	0.89%	0.76%	0.68%	0.59%
Prince George's County	0.05%	0.92%	0.96%	1.06%	0.53%	0.45%	0.46%	0.73%	0.91%

Projections for the Baltimore Region based on Round 6C from the Baltimore Metropolitan Council of Government's Cooperative Forecasting Committee.
Projections for the Washington Suburban and Southern Maryland Regions based on Round 7.0 of the Metropolitan Washington Council of Government's Cooperative Forecasting Committee.

Prepared by the Maryland Department of Planning, Planning Data Services, September 2006.
National statistics derived from National Census populations and projections

Figure 3-14

Montgomery County's population in general is well educated with over 54% of people 25 years or older having a bachelor's degree, and almost 30% holding advanced degrees. 71% of the population is private wage or salary employees, 22% are government workers and 7% are self employed. The median age for residents in 2005 was 38 years old.

Based on the 2000 census, there are 334,632 housing units in Montgomery County, reflecting an increase of over 13% since 1990. Owner occupied units account for 223,017 or approximately 67% of the units. This is higher than the national average of 66.2% for homeownership. Rented units account for 101,548, and 10,067 were vacant, for rent, or for sale. The median home value is \$221,800 and the mean home value is \$280,206 for owner-occupied units, well above the national median home value of \$119,600. The median monthly owner cost for owners with a mortgage is \$1,634 and for owners without a mortgage, the median monthly owner cost is \$448. The median cost for those who rent is \$914 and the mean cost is \$966 per month. In 2005 the data reflects a median house value of \$466,100, a significant jump from the 2000 census. The median monthly rent for 2005 was reported at \$1,111. (*Census*)

According to Maryland's Department of Planning BRAC Report, dated Dec 2006, "For the purposes of the report, the shifting of positions from Walter Reed Army Medical Center in Washington, D.C. to the National Naval Medical Center in Montgomery County was viewed as a "wash" in terms of household impact since the two facilities are only six miles apart." Even so, Montgomery County's BRAC-related households represent less than 4.0 percent of the anticipated supply available to in-migrant households over the 2009 to 2015 period. No major demand versus supply issues are identifiable at the small area level. (*MDP-BRAC Rpt*)

More specific to the location of NNMC within the county, is Bethesda data. The median household income for Bethesda in 2005 was \$113,800, up from \$99,102 in 2000. The median house value in 2005 for Bethesda was \$833,000, up from \$396,400 in 2000, and significantly higher than the overall Maryland median house value of \$280,200 in 2005. (*City-Data*)

Bethesda has a reputation for having one of the highest educated populations in the country. With almost 80% of the population over 25 years of age having a Bachelor's degree or higher and nearly 50% having graduate or professional degree. The unemployment rate is extremely low at only 2.1%. The most common industry for both male and female workers is professional, scientific and technical services with approximately 30% of the working population in this area. (*City-Data*)

3.11 Other Relevant Federal Research Facilities

NNMC is among the major medical federal research and development installations in Montgomery County, but there are many other institutions. Besides the WRAMC main post, there are many federal research/medical facilities in the Washington DC area to include:

WRAMC, Forest Glen Section, is located in Silver Spring, MD. This is a support and research area approximately four miles north of the main post. Forest Glen is the home of the Walter Reed Army Institute of Research and Naval Medical Research Institute. There are also community support activities to include a child development center, post exchange (PX), commissary, clothing sales, bowling alley, arts and crafts, Malogne House and Fisher Houses. Some discretionary moves identified by BRAC 2005 will be relocated to Forest Glen Section.

The National Institutes of Health (NIH) is a focal point for federal government biomedical research. Located west of NNMC, across Rockville Pike, the NIH is a component of the U.S. Department of Health and Human Services (DHHS). It is composed of several Institutes and centers that either conduct or support scientific research.

There are many other federal research agencies located in the Washington, D.C. area that are not specific to medical research to include the Department of Energy, the National Institute of Standards and Technology, the Naval Surface Warfare Center, the U.S. Army Research Laboratory, the National Aeronautics and Space Administration Goddard Flight Center, and Naval Research Laboratory, to name a few.